

# Attendance Sheets

District	Last Name	Present	Absent	Present/Late
District 14 - Town of Wappinger	Amparo	✓	X②	X②
District 4 - Town of Hyde Park	Black	✓		
District 13 - Towns of LaGrange, East Fishkill, and Wappinger	Bolner	✓		
District 3 - Town of LaGrange	Borchert	✓		
District 8 - City and Town of Poughkeepsie	Brendli	✓		
District 22 - Towns of Beekman and Union Vale	Coviello	✓		
District 6 - Town of Poughkeepsie	Flesland	✓		
District 16 - Town of Fishkill and City of Beacon	Forman	✓		
District 21 - Town of East Fishkill	Horton	✓		
District 15 - Town of Wappinger	Incoronato	✓		
District 10 - City of Poughkeepsie	Jeter-Jackson	✓		
District 18 - City of Beacon and Town of Fishkill	Landisi	✓		
District 12 - Town of East Fishkill	Metzger	✓		
District 17 - Town and Village of Fishkill	Miccio	✓		
District 1 - Town of Poughkeepsie	Nesbitt	✓		
District 19 - Towns of North East, Stanford, Pine Plains, Milan	Pulver	✓		
District 9 - City of Poughkeepsie	Rieser	✓		
District 5 - Town of Poughkeepsie	Roman	✓		
District 2 - Towns of Pleasant Valley and Poughkeepsie	Sagliano	✓		
District 20 - Town of Red Hook	Strawinski	✓		
District 24 - Towns of Dover and Union Vale	Surman	✓		
District 23 - Towns of Pawling, Beekman and East Fishkill	Thomes	✓		
District 7 - Towns of Hyde Park and Poughkeepsie	Truitt	✓		
District 11 - Towns of Rhinebeck and Clinton	Tyner	✓		
District 25 - Towns of Amenia, Washington, Pleasant Valley	Washburn	✓		
Present: 25	Total:	25	0	
Absent: 0				
Vacant: 0				

Date: 2/8/16

Regular Meeting  
of the  
Dutchess County Legislature

Monday, February 8, 2016

The Clerk of Legislature called the meeting to order at 7:00 p.m.

Roll Call by the Clerk of the Legislature

PRESENT: 25     Borchert, Miccio, Bolner, Strawinski, Amparo, Black,  
Brendli, Coviello, Flesland, Forman, Horton, Incoronato,  
Jeter-Jackson, Landisi, Metzger, Nesbitt, Pulver, Rieser,  
Roman, Sagliano, Surman, Thomes, Truitt, Tyner,  
Washburn

ABSENT: 0

PRESENT, LATE: 0

Quorum Present.

Pledge of Allegiance to the Flag; invocation given by Pastor John R. Thomas of Tabernacle Baptist Church in Poughkeepsie, followed by a moment of silent meditation.

Commendations and Proclamations

Commendation: Eagle Scout Nicholas Goelbelbecker

Commendation: The EndoCrime Fighters

The Chairman entertained a motion from the floor, duly seconded, to suspend the rules to allow the public to address the Legislature with respect to agenda items.

Tonya Pineda, Davies Place, Poughkeepsie, stated her concern with the short timeframe to inform the public regarding the jail expansion.

Constantine Kazolias, 47 Noxon Street, Poughkeepsie, stated that the jail was a state mandate and that New York State should pick up part of the bill.

No one else wishing to be heard, the Chairman entertained a motion from the floor, duly seconded, to resume the regular order of business.

Chairman Borchert entertained a motion to approve the January 2016 minutes.

The January 2016 minutes were adopted.

## **COMMUNICATIONS RECEIVED FOR THE FEBRUARY 2016 BOARD MEETING**

Received from County Clerk, Mortgage Tax Report January 1, 2016 – January 31, 2016.

Received from Erie County Legislative Branch, Mimosa Resolution to eliminate the precedent that prohibits the sale of alcohol on Sunday.

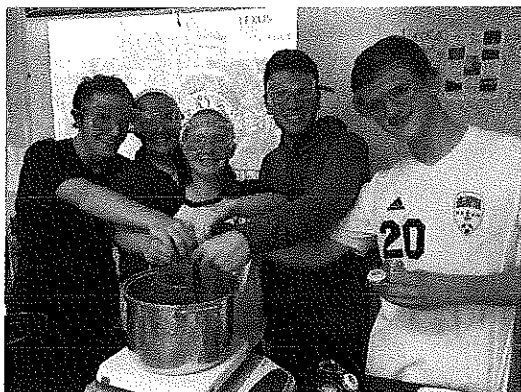
Received from County Attorney Fedorchak, memo certifying that representation by Daniels, Porco and Lusardi, LLP was necessary and the statement of services rendered should be satisfied for the lawsuit entitled "Knapp v. Haight".

Received from County Executive Molinaro, memo appointing Jessica White as Budget Director effective February 1, 2016.

Received from Schuyler County Legislature, Resolution No. 375, Authorize Approval of Burial Allowances – Social Services.

# Arlington students win \$10,000 in Eco Challenge

Journal staff 3:52 p.m. EST January 28, 2016



(Photo: Courtesy photo)

Arlington High School students' work on endocrine disruptors has earned them a \$10,000 scholarship and a chance to win an additional \$30,000 in the final phase of the Scholastic Lexus Eco Challenge.

According to a written release, endocrine disruptors, which are chemicals that prevent normal functioning of hormones and cause other negative effects, can be found in everyday personal-care products, such as sunscreen, face lotion and more. When those disruptors get washed down household drains, they can mix with our drinking water. Arlington High School's Maribel Pregnall, the Endocrine Fighters and teacher adviser, employed a broad approach to the project, by conducting research, touring the local water treatment plant, producing an all-natural homemade skin lotion, presentations to parents and students, and more.

The Lexus Eco Challenge is a national scholarship competition for teens across the U.S. in grades six through 12 that inspires and empowers young people to learn about the environment and take steps to make it better for their communities and world.

Through the Lexus Eco Challenge, more than 29,000 middle and high school students have earned more than \$5 million for themselves, their teachers and their schools, the written release stated. This is the eighth year of the competition and this year, \$500,000 in grants and scholarships will be awarded in total. Visit <http://lexus.scholastic.com/> for more information.

## Triclosan Experimentation

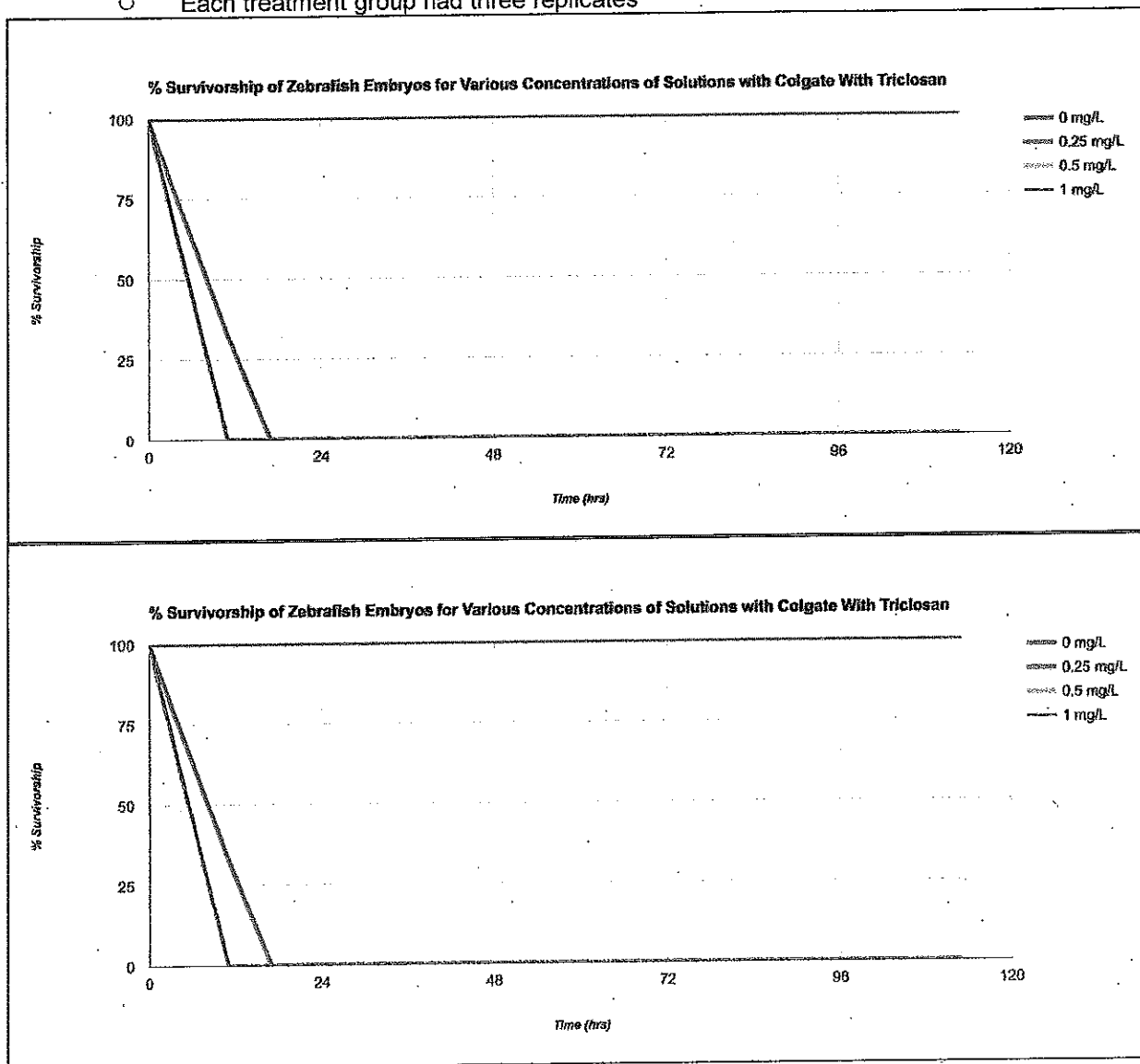
EndoCrime Fighters of Arlington High School: Kira Murphy, John Furcick, Hali Pregnall, Luke Hagin, Jamie Constantino, Maribel Pregnall (Advisor)

### Experiment 1:

For our first experiment we noted that Colgate Total toothpaste contains the endocrine disrupting ingredient Triclosan, while regular Colgate toothpaste does not. In order to observe the effects of Triclosan we compared the impact of Colgate Total and regular Colgate toothpaste on zebrafish embryos. Zebrafish are model organisms. With recent information gathered on their development and genome, they are being used increasingly in studies on chemical toxicity.

Our experiment consisted of:

- A control group with just embryo rearing solution (and no toothpaste)
- Concentration of 0.25 mg/L, 0.5 mg/L, and 1 mg/L of toothpaste with triclosan
- Concentration of 0.25 mg/L, 0.5 mg/L, and 1 mg/L of toothpaste without triclosan
- Each treatment group had three replicates



Results: In our experiment, every embryo in the concentrations with toothpaste died, regardless of

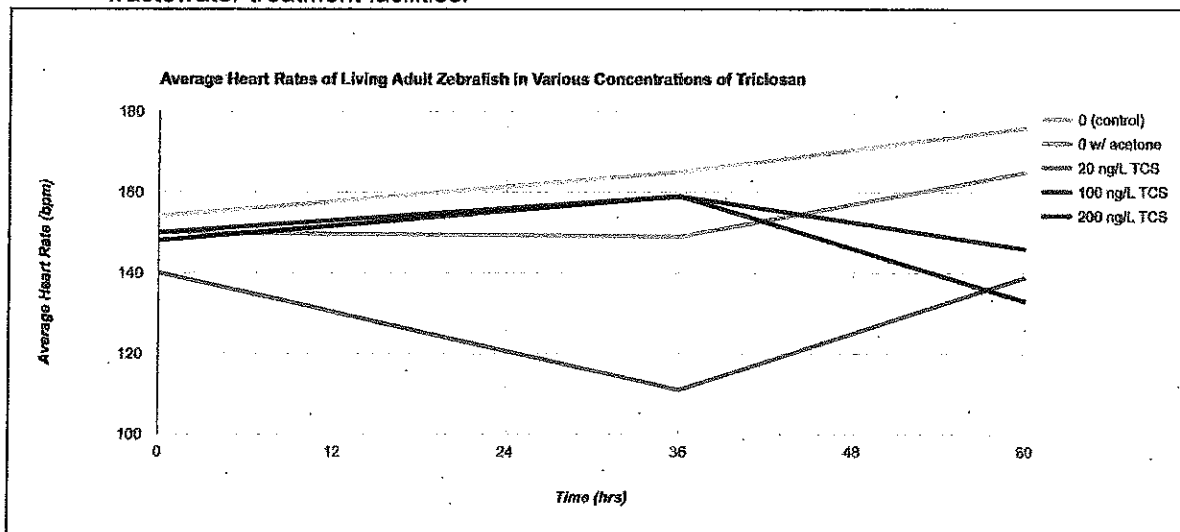
whether or not the toothpaste contained triclosan. This did not provided conclusive results on the chemical triclosan. We were not able to isolate the variable of triclosan, which contributed to the inconclusive results of this experiment. Further experimentation with isolated triclosan is needed.

#### Experiment 2:

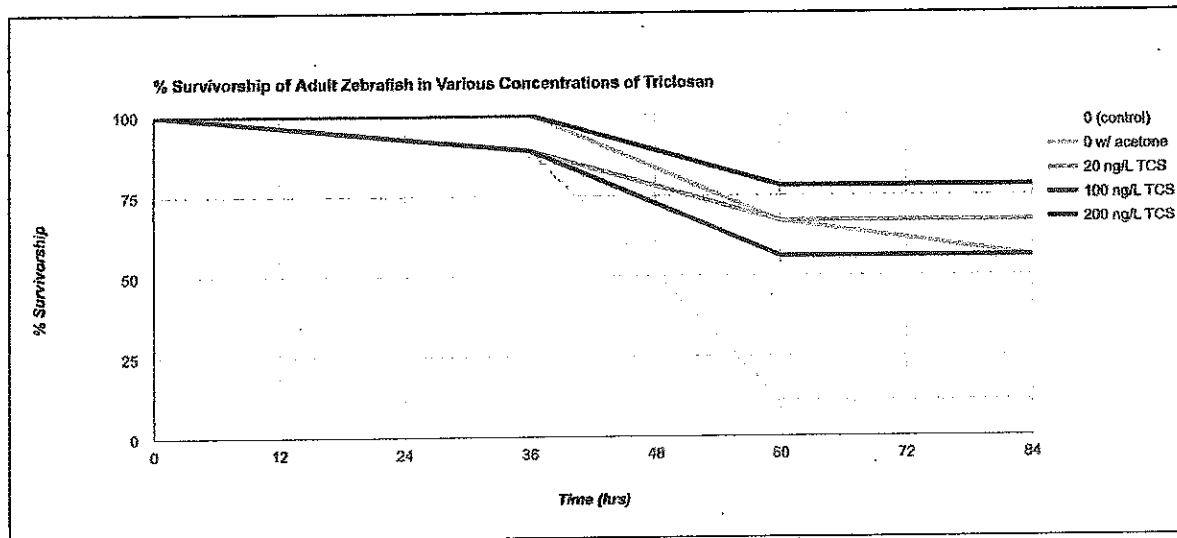
In our second experiment, we obtained pure triclosan, in hopes of obtaining better results. In this experiment we exposed matured zebrafish hatchlings to different concentrations of triclosan. We then observed their survivorship and heart rates over a period of time.

Our experiment consisted of:

- A control group with just embryo rearing solution
- A second control group with embryo rearing solution and acetone, which was used to dissolve the hydrophobic triclosan before serial dilutions; the acetone dilution was 1:4000 by volume
- A 20 ng/L concentration of triclosan with embryo rearing solution and acetone (1:4000)
- A 100 ng/L concentration of triclosan with embryo rearing solution and acetone (1:4000)
- A 200 ng/L concentration of triclosan with embryo rearing solution and acetone (1:4000)
  - Each treatment group had three replicates
- The highest treatment we used, 200 ng/L, is comparable to levels found downstream from wastewater treatment facilities.



Triclosan slowed the heart rate of the zebrafish over time. The control had the fastest heart rate.

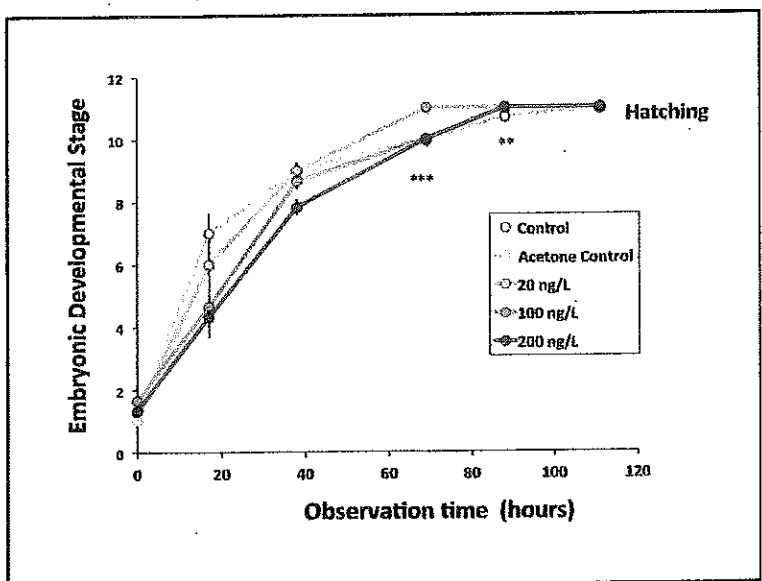
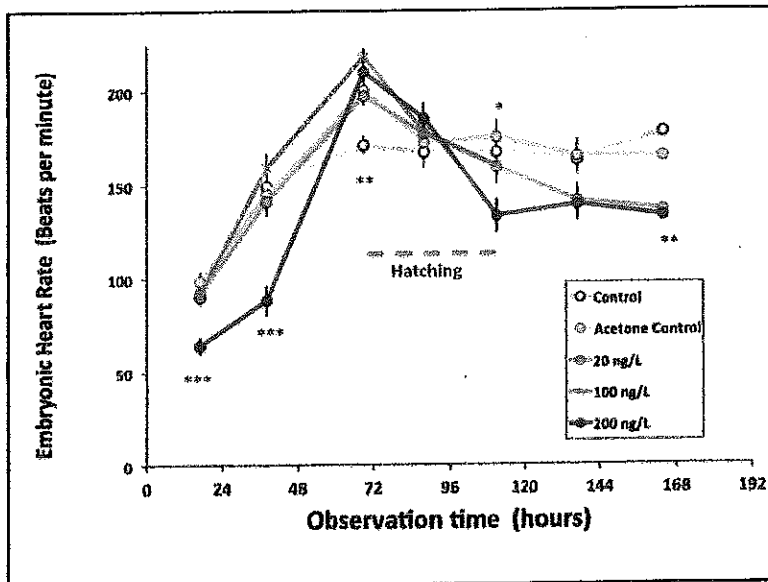


The controls died due to parasites and possibly due to rough handling, because we started with the controls first and had not mastered the technique for moving them from petri dish to slide with a pipette.

### Experiment 3:

Using our knowledge from the past two experiments, we looked at the effects of pure triclosan on zebrafish embryonic development, as well as heart rate. Our experiment consisted of:

- Control group with just embryo rearing solution
- A second control group with embryo rearing solution and acetone, which was used to dissolve the hydrophobic triclosan before serial dilutions (1:4000 dilution)
- A 20 ng/L concentration of triclosan with embryo rearing solution and acetone (1:4000)
- A 100 ng/L concentration of triclosan with embryo rearing solution and acetone
- A 200 ng/L concentration of triclosan with embryo rearing solution and acetone
- Each treatment group had three replicates



Results: Triclosan slowed the heart rates of the zebrafish over time. Triclosan also slowed the development of the embryos. Once the embryos exposed to the higher concentrations of triclosan were



hatchlings, they were very emaciated and often missing pectoral fins.

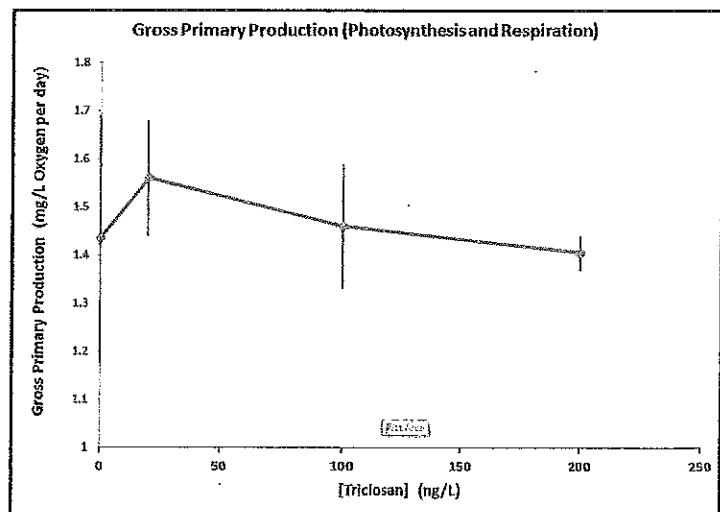
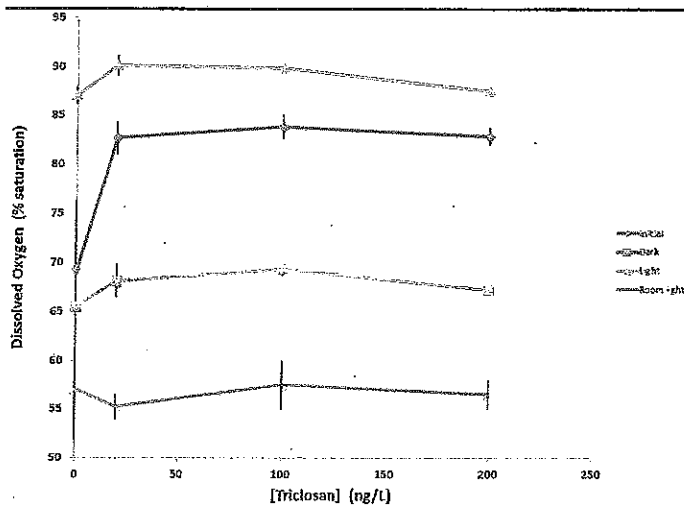
#### Experiment 4:

We took a step away from zebrafish and instead looked at the effects of varying concentrations of triclosan on biofilms. Biofilms are marine and freshwater microcosms that consist of algae, bacteria, cyanobacteria, protozoans, and microscopic crustaceans and worms. They are unique ecological communities, often referred to as "red slime" in aquaria, but which are critical components of natural aquatic ecosystems.

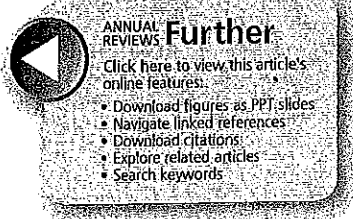
Our experiment consisted of:

- 2 replicates of each treatment (250 mL) inside glass bowls
  - Blanks with no biofilms, only salt water from the fish tank
  - Controls with 1.5 mL of biofilm with no triclosan and no acetone
  - Controls with 1.5 mL of biofilm with no triclosan but containing an acetone dilution (1:4000), which was used to dissolve the hydrophobic triclosan before serial dilutions
  - A 20 ng/L concentration of triclosan with acetone (1:4000) and salt water from the fish tank
  - A 100 ng/L concentration of triclosan with acetone (1:4000) and salt water from the fish tank
  - A 200 ng/L concentration of triclosan with acetone (1:4000) and salt water from the fish tank

We measured the initial dissolved oxygen of each bowl, then exposed the treatments to periods of total darkness, then direct light, then room light, and measured the dissolved oxygen after each period. Our experiment occurred over the course of 3 days. We calculated Gross Primary Production (GPP = dissolved oxygen after the light treatment - dissolved oxygen after the dark treatment).



Results: The increasing concentrations of triclosan suggest a decrease in biofilm metabolism. An unexpected outcome was the 0 ng/L replicates show even lower GPP. To improve our experiment, we are currently cultivating our own biofilms on glass disks to try to better quantify the composition of our communities. Since these communities are so diverse, growing biofilms on the disks is an attempt to control another variable in our experiment.



# Triclosan: A Widespread Environmental Toxicant with Many Biological Effects

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## Keywords

bioaccumulation, antibacterial, environmental hazard, hormone homeostasis, antimicrobial resistance, liver pathogenesis, precautionary principle

## Abstract

Triclosan (TCS) is a broad-spectrum antimicrobial agent that has been added to personal care products, including hand soaps and cosmetics, and impregnated in numerous different materials ranging from athletic clothing to food packaging. The constant disposal of TCS into the sewage system is creating a major environmental and public health hazard. Owing to its chemical properties of bioaccumulation and resistance to degradation, TCS is widely detected in various environmental compartments in concentrations ranging from nanograms to micrograms per liter. Epidemiology studies indicate that significant levels of TCS are detected in body fluids in all human age groups. We document here the emerging evidence—from in vitro and in vivo animal studies and environmental toxicology studies—demonstrating that TCS exerts adverse effects on different biological systems through various modes of action. Considering the fact that humans are simultaneously exposed to TCS and many TCS-like chemicals, we speculate that TCS-induced adverse effects may be relevant to human health.

## INTRODUCTION

First introduced in the early 1970s to the health care industry, 5-chloro-2-(2,4-dichlorophenoxy) phenol, commonly known as triclosan (TCS), is a synthetic, lipid-soluble antimicrobial agent that has been used in the United States and globally for more than 40 years as an antiseptic, disinfectant, or preservative in clinical settings (surgical scrubs), personal care products (e.g., hand soaps, shampoos, deodorants, laundry detergents, cosmetics), household items (e.g., cutting boards, kitchenware, textiles, packaging materials), and medical devices (e.g., surgical sutures, catheters, ureteral stents) (1–3). In hospitals, TCS has been employed in surgical scrubs and used in hand washing prior to surgery to eradicate microorganisms such as methicillin-resistant *Staphylococcus aureus* (MRSA) (4); however, the necessity and effectiveness of TCS-containing products in household and other non-health-care-related settings are the subject of an ongoing scientific and public debate, given the associated risks (5).

TCS is bacteriostatic at low concentrations, as it inhibits fatty acid biosynthesis through inhibition of the enoyl-acyl carrier protein reductase (FabI) enzyme by forming a noncovalent complex with NAD<sup>+</sup> in the FabI active site (6, 7). As FabI is essential for normal cellular division, TCS-mediated FabI inhibition effectively suppresses the growth of numerous gram-negative and gram-positive bacteria, whereas at higher concentrations it induces K<sup>+</sup> leakage, leading to membrane destabilization and a rapid bactericidal effect (8, 9). As a chlorinated biphenyl ethyl, TCS is structurally similar to polychlorinated biphenyls, bisphenol A, dioxins, and thyroid hormones (10). The aromatic nature of TCS and its high chlorine content make it resistant to degradation and persistent in the environment.

TCS is regulated in the United States by both the Food and Drug Administration (FDA) as an over-the-counter drug (e.g., an additive in hand soaps and deodorants) and the Environmental Protection Agency (EPA) as an antimicrobial agent (e.g., plastic films for packaging). In 1997, the FDA approved the use of TCS (0.3%) in Colgate Total toothpaste to prevent gingivitis and cavities. The use of TCS has been generally considered well-tolerated and safe. For this reason, manufacturers have been adding it to their consumer formulas for the past few decades in the hopes of providing the user with long-lasting antibacterial protection. As a result, the widespread use of TCS allows the chemical to enter the environment through many pathways. The majority of TCS is disposed of in municipal sewer systems, receives treatment in local wastewater treatment plants (WWTPs), and undergoes biodegradation and sorption, resulting in different levels of TCS reaching the surface water through effluents (11). TCS and its derivatives have been detected in the effluent of WWTPs across the globe as well as in their receiving waters and surrounding environment. Within aquatic habitats, TCS likely accumulates in sediments, as it is a lipophilic compound with low aqueous solubility. It is evident now that TCS is one of the most commonly encountered contaminants in solid and water compartments and has been detected in levels from nanograms to several micrograms per liter in sediments, WWTPs, rivers, lakes, and even drinking water sources (11–15). In fact, TCS is listed among the seven most frequently detected compounds in streams across the United States (16). Consequently, TCS imposes a significant impact on aquatic ecosystems and many aquatic species, with algal species being among the most sensitive to TCS toxicity (17).

Based on the mounting evidence of TCS detection in human body fluids, humans are unequivocally exposed to significant and potentially unsafe levels of TCS. TCS is not acutely toxic to mammals, but it can modulate phase I, II, and III drug-process genes by interacting with the nuclear receptors pregnane X receptor (PXR) and constitutive androstane receptor (CAR) (18–21). In animal models, many lines of evidence have suggested that TCS has adverse effects on endocrine function, thyroid hormone homeostasis, and antibiotic resistance. The

carcinogenicity of TCS has been studied in rats, mice, and hamsters, and the results summarized by Rodricks et al. (2) indicate that TCS can cause liver pathogenesis—particularly tumor formation—in mice. More recent studies have provided new evidence linking TCS to tumorigenesis in animal models. In this review, in addition to discussing epidemiology studies and environmental impacts of TCS, we focus on potential health issues surrounding the use of TCS by providing a data collection that spans a wide range of *in vitro* and *in vivo* experimental models.

## FATE AND EFFECTS OF TCS IN THE ENVIRONMENT

The proliferation of TCS use in daily care products coincides with a plethora of evidence of its bioaccumulation and persistence in the environment. Up to 96% of TCS in consumer products is rinsed down the drain, leading to the concentration of TCS, ranging from 1 to 10 mg/L, in WWTP influent (11). During the wastewater treatment process, TCS may convert to other derivatives: It can be biologically methylated into methyltriclosan (22) and/or be transformed during the disinfection of wastewater with free chlorine into chlorinated TCS derivatives, which possess a higher degree of environmental persistence than their parent compound because of their lipophilicity and resistance to biodegradation. Additionally, researchers have reported that the chlorinated TCS derivatives are more toxic than TCS itself, and their median lethal dose ( $LD_{50}$ ) value decreases as the number of chlorine substitutions in them increases (23). When discharged into surface waters through WWTP effluents, TCS and the chlorinated derivatives may undergo direct photolysis and be photochemically transformed to 2,4-dichlorophenol and polychlorodibenzo-*p*-dioxins (PCDDs), including 1,2,8-trichlorodibenzo-*p*-dioxin (1,2,8-*TriCDD*), 1,2,3,8-tetrachlorodibenzo-*p*-dioxin (1,2,3,8-*TCDD*), 2,3,7-trichlorodibenzo-*p*-dioxin (2,3,7-*TriCDD*), and 2,8-dichlorodibenzo-*p*-dioxin (2,8-*DCDD*) (24, 25) (Figure 1). Notably, PCDDs are generally highly persistent in the environment, and some are associated with carcinogenic activities (26).

Depending on the operation of the WWTP, a wide range of TCS concentrations can be released into the environment through receiving waters. A study in which TCS concentrations were measured in US wastewater effluent (27) documented that they ranged from 200 to 2,700 ng/L. Total annual loading of TCS into US surface waters has been estimated at 5,200–18,824 kg/year, with approximately 50% coming from WWTP effluents (28). A recent study of water systems in North America indicated that higher concentrations of TCS, its chlorinated derivatives, and their derivative dioxins in small-scale water systems can be directly attributed to increased TCS use (29). Once in the environment, TCS tends to accumulate and persist in biosolids and can enter the terrestrial environment during the application of sewage sludge to agricultural land (30, 31). TCS has been detected not only in surface water and estuarine sediment but also in freshwater at concentrations of up to 800 ng/kg (31).

Consequently, researchers have detected TCS contamination in both aquatic and terrestrial environments and have observed its bioaccumulation in aquatic biota, such as snails, algae (32), fish (33), and marine mammals (34). TCS also adsorbs to microbial biomass owing to its hydrophobic nature—as shown by its log octanol-water partition coefficient ( $K_{ow}$ ) of 4.8 (30). A study conducted by Wilson et al. (35) showed that TCS may influence the structure and function of algal communities in water ecosystems that received WWTP effluent. In fact, the toxicity of TCS has been studied using several types of environmentally sensitive species—including microalgae and fish—which have very low median effective concentration ( $EC_{50}$ ) values approaching the amount of TCS detected in the natural aquatic environment. Algal species appeared to be vulnerable to the toxic effects of TCS, with a 96-h  $EC_{50}$  of 1.4  $\mu$ g/L and a 96-h no-observed-effect concentration (NOEC) of 0.69  $\mu$ g/L (17). In the developmental stage, rainbow trout

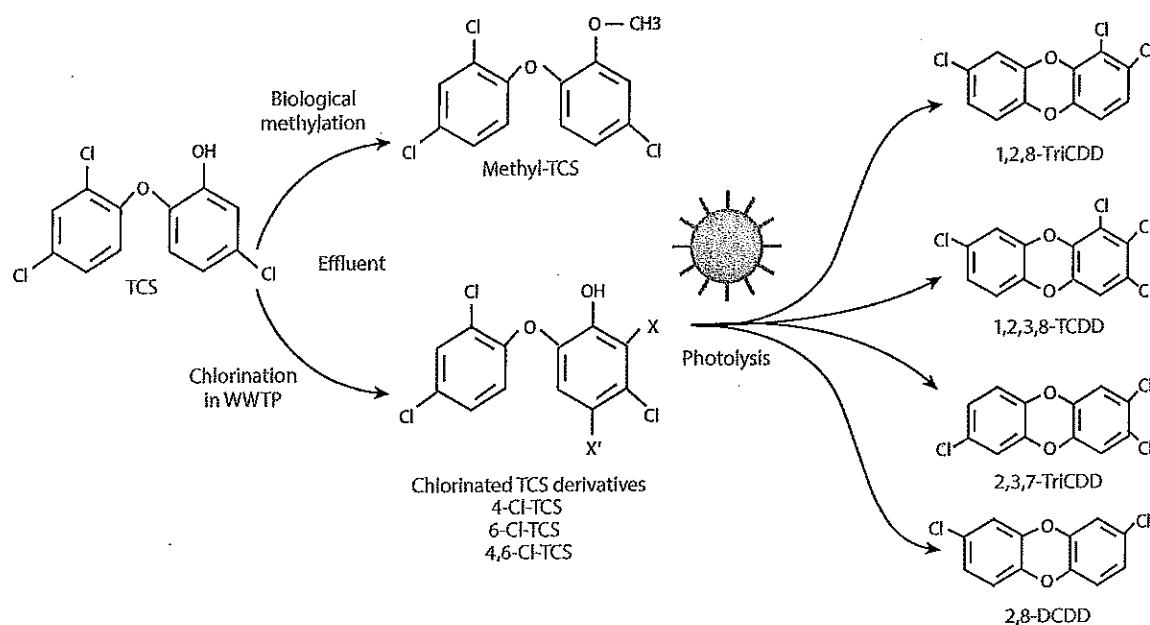


Figure 1

Chlorinated TCS derivatives and their dioxin photoproducts transformed from TCS in the environment. During the disinfection of wastewater with free chlorine, TCS is chemically transformed into chlorinated derivatives, including 4-Cl-TCS, 6-Cl-TCS, and 4,6-di-Cl-TCS. Through subsequent photolysis, TCS and its chlorinated derivatives are photochemically transformed to various PCDDs, generally with 1,2,8-TricDD, 1,2,3,8-TCDD, 2,3,7-TricDD, and 2,8-DCDD being most abundant in the environment. In addition, a small percentage of methyl-TCS is produced during the normal biodegradation process (25). Abbreviations: 1,2,3,8-TCDD, 1,2,3,8-tetrachlorodibenzo-*p*-dioxin; 1,2,8-TricDD, 1,2,8-trichlorodibenzo-*p*-dioxin; 2,3,7-TricDD, 2,3,7-trichlorodibenzo-*p*-dioxin; 2,8-DCDD, 2,8-dichlorodibenzo-*p*-dioxin; PCDD, polychlorodibenzo-*p*-dioxin; TCS, triclosan; WWTP, wastewater treatment plant.

(*Oncorhynchus mykiss*) was sensitive to TCS toxicity, with significant effects on the survival rate under the 0.071 mg/L concentration. At concentrations above 0.7 mg/L, TCS exhibited teratogenic responses, hatching delay, and mortality in the embryos and larvae of zebrafish, with a 96-h median lethal concentration (LC<sub>50</sub>) of 0.42 mg/L. When researchers combined results of genetic, developmental, and enzymatic biomarker studies, they estimated that TCS concentrations of no less than 0.3 mg/L pose a hazard to aquatic ecosystems (36). A study measuring the growth-inhibiting effect of 12 different antibacterial agents indicated that TCS is one of the most toxic antibacterial compounds for the freshwater microalga *Pseudokirchneriella subcapitata*, with a NOEC of 200 ng/L (37).

TCS is biodegradable and photo-unstable and continues to break down following its release into the aquatic environment (12–14). TCS has a half-life of approximately 11 days in surface water (38) and is degraded in aerobic soil with a half-life of 18 days. By contrast, it persists in anaerobic soil and sterile aerobic conditions (39). As TCS coexists with microplastic [i.e., polyvinyl chloride (PVC)] in the environment, a recent study uncovered that when lugworms (*Arenicola marina*) were exposed to PVC that was presorbed with TCS, uptake of TCS from PVC not only diminished their ability to engineer sediments but also raised their mortality (40).

## TCS METABOLISM AND HUMAN EXPOSURE

### TCS Absorption, Distribution, Metabolism, and Elimination

The most likely routes of exposure to TCS in humans are ingestion and skin absorption (41). When men applied cream containing 2% TCS on their skin in a clinical study, the absorption of TCS, calculated from urinary excretion, was estimated to be less than 10% in all individuals (42). A similar study by Lin (43) determined that the TCS retention rate was 7.33% from mouthwash containing 0.03% TCS. Following absorption, TCS is metabolized primarily through conjugation reactions to glucuronide and sulfate conjugates that are eliminated in feces and urine (44–46). Following the application of 1% TCS in a soap formulation to the skin in rats and guinea pigs, TCS glucuronide was detected as the major urinary metabolite (44). In another TCS metabolism study in which researchers administered a single topical dose of TCS to rats, unchanged TCS and TCS glucuronide were identified in urine and feces, with a small amount of TCS sulfate in urine (45). Wang et al. (20) compared TCS glucuronidation and sulfonation activities in human liver microsomes, and pharmacokinetic studies suggested that TCS glucuronide and sulfate may be formed in the liver at approximately equal rates at the environmentally relevant concentration (1 to 5  $\mu\text{M}$ ). Sulfonation is expected to be the major metabolic pathway for TCS elimination at concentrations below 1  $\mu\text{M}$  owing to the fact that TCS sulfonation has a lower Michaelis-Menten constant ( $K_m$ ) than glucuronidation, whereas glucuronidation that exhibits a higher maximal velocity ( $V_{max}$ ) compared to sulfonation would be the predominant route for TCS clearance at higher concentrations (20). Using the cDNA-based cell expression system in COS cells, we found that several of the human UDP-glucuronosyltransferases (UGTs) are capable of glucuronidating TCS, with UGT1A1, 1A3, 1A4, 1A6, and 1A7 exhibiting the highest activities (Figure 2). In reports regarding human exposure, TCS levels range from undetectable or very little to 38% unconjugated after oral ingestion of TCS (3, 43, 47), indicating possibly large discrepancies in individual glucuronidation or sulfonation capacities. We suspect that when certain conditions occur—long-term TCS exposure, presence of concomitant substrates (e.g., clinical drugs and other environmental pollutants that are UGT1A substrates), or pathological liver status associated with lower expression levels of UGTs (e.g., age, alcoholic liver disease, steatosis)—TCS exposure may exceed the metabolic capacity that the body provides (48–50). Thus, people who have impaired or reduced glucuronidation conjugation capacity would be at a higher risk of adverse TCS effects.

A human pharmacokinetic study demonstrated that TCS can be rapidly absorbed, metabolized, and eliminated following a single oral dose. The maximum plasma concentration was reached within 1–3 h, and the estimated terminal plasma half-life was 21 h, with baseline levels reached within 8 days after exposure (47). Regardless of the route of administration, the primary elimination route in humans is urinary, with a median excretion half-life of 11 h after oral intake of TCS (47), whereas fecal elimination prevails in rodents (1), which have a half-life of elimination ranging from 8 to 15 h. Following the skin application of  $^{14}\text{C}$ -labeled TCS in mice, maximum absorption was obtained approximately 12 h after dosing, and radioactivity appeared in all organ tissues examined, with higher levels in the gall bladder, gastrointestinal tract, liver, and lung (46). Of the radioactivity detected in the feces, the majority of TCS was in the free form, suggesting the hydrolysis of TCS conjugates by gut microflora (44).

### TCS-Mediated Regulation of Drug-Processing Genes

Complex metabolic pathways in mammals, orchestrated by multiple families of drug-processing genes, are responsible for the detoxification of potentially harmful endogenous metabolic products

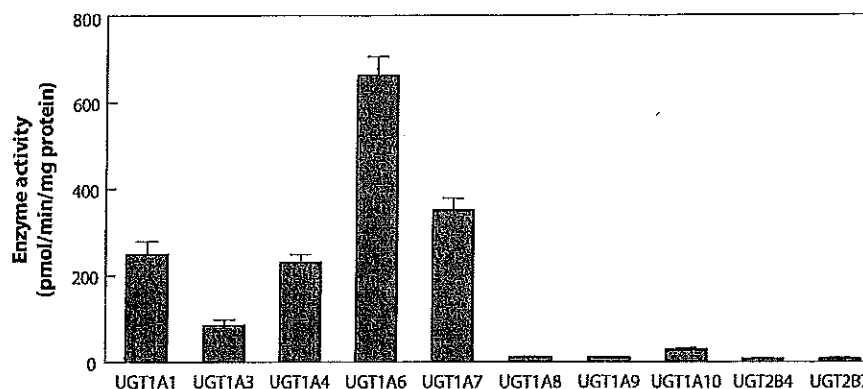


Figure 2

TCS glucuronidation. UGT specificity for the metabolism of TCS was examined using transfected COS cells with individual UGTs. Each of the full-length UGT1As, UGT2B4, and UGT2B7 cDNAs was subcloned to the expression vector. The recombinant plasmids were transfected into COS cells, and TCS glucuronidation activities were measured using a mixture containing cell lysates, TCS, and  $^{14}\text{C}$ -UDPGlcA as described previously (119). Abbreviations: TCS, triclosan; UGT, UDP-glucuronosyltransferase.

and xenobiotics and are tightly regulated by various nuclear receptors—namely CAR, PXR, and peroxisome proliferator activating receptor  $\alpha$  (PPAR $\alpha$ ) (51–53)—in responding to a wide range of structurally diverse xenobiotics, providing an adaptive response to environmental challenges. Many in vivo and in vitro experiments have shown that TCS can interact with nuclear receptors and regulate the corresponding downstream drug-processing genes. In a PXR reporter assay in which investigators transfected cells with the human PXR and a reporter plasmid containing the PXR response element in the *CYP3A4* promoter region, TCS moderately activated human PXR (19), indicating a potential regulation of *CYP3A4* gene expression. By employing probe substrate-specific enzyme assays, researchers have shown that TCS treatment increased protein and enzyme activities of rat *Cyp2b1/2* and *Cyp3a1*—target genes of CAR and PXR—with hepatic microsomes or in hepatocytes (18, 54).

To understand the underlying mechanism through which TCS modulates gene expression, we monitored the activities of a series of mouse xenobiotic receptors (XenoRs) in response to TCS treatment, including PXR, CAR, liver X receptor  $\alpha$ , farnesoid X receptor, vitamin D receptor, PPAR $\alpha$ , PPAR $\beta$ , PPAR $\gamma$ , estrogen receptor  $\alpha$  (ER $\alpha$ ), ER $\beta$ , and glucocorticoid receptor. Of the 11 XenoRs screened with TCS (10  $\mu\text{M}$ ), only CAR was activated by TCS, with a moderate induction of luciferase activity; all other nuclear receptors produced statistically insignificant induction (21). By conducting a ligand binding assay, we further demonstrated that TCS acted as a CAR activator but not an agonist ligand. TCS-mediated CAR activation elicited a significant induction of hepatic *CYP2b10* in mice, and this induction was nearly completely abolished in livers of *CAR*<sup>-/-</sup> mice, indicating that TCS-induced *Cyp2b10* gene induction requires CAR activation. Another study using various reporter assays consisting of the nuclear receptors PXR and CAR across species—human, mouse, and rat—showed that TCS is an agonist for both human PXR (hPXR) and hCAR. These in vitro results put forward the estimation that the lowest observable effect level for TCS activation of hPXR is approximately 15 mg/kg/day. The authors concluded that TCS is not likely to mediate adverse outcomes resulting from induction of drug-processing

genes because current human exposures to TCS are insufficient to activate hPXR and hCAR, judging from the estimated human oral exposure to TCS of 0.13 mg/kg/day (55).

The concept of TCS upregulating enzymes that are responsible for thyroid hormone clearance is supported by a study conducted by Paul et al. (56) in which oral exposure to TCS in rats produced hypothyroxinemia with a significant reduction in serum thyroxine (T<sub>4</sub>) levels. These results indicated that—possibly through activation of the nuclear receptors PXR and CAR—TCS induces hepatic drug-processing genes that are responsible for T<sub>4</sub> clearance, thus decreasing serum T<sub>4</sub>. The presence of TCS in the biological system may also interfere with the metabolism of coexisting xenobiotics or endogenous compounds. Pollock et al. (57) investigated the interaction of TCS with bisphenol A and found that TCS enhanced the presence of bisphenol A in specific tissues of adult female and male mice. Following combined TCS and bisphenol A administration, levels of bisphenol A were elevated in the lung, heart, muscle, uterus, ovaries, and serum of female mice and the epididymis and serum of male mice. These experiments implied that TCS may interfere with hepatic conjugating enzymes and inhibit the metabolism of bisphenol A (57). In summary, in a subset of people who have poor TCS metabolism, are exposed to higher amounts of TCS and TCS-like compounds, or both, TCS—by acting on activation of inducible enzymatic pathways through interactions with PXR and CAR—may have a significant impact on many aspects of xenobiotic and endobiotic metabolism and disposition, potentially affecting the toxicity of drugs and chemical pollutants as well as endocrine homeostasis.

### Human Exposure to TCS

Numerous epidemiology studies that documented TCS detection in urine, blood, and breast milk in different regions of the world suggest that the general population is exposed to TCS. A study examining the body burden of phenolic halogenated compounds in Sweden identified TCS as one of many such compounds present in the plasma of the tested population (58). A study of TCS detection in urine samples among the US general population revealed that a wide range of TCS concentrations (2.4–3,790 µg/L) was present in 74.6% of 2,517 participants, with the highest levels occurring in young adults in their twenties and those in higher socioeconomic positions (41).

Pregnant women and their fetuses are uniquely vulnerable to endocrine disruptors, potentially including TCS. Researchers focusing on this special population detected TCS in human milk at concentrations ranging from 100 to 2,100 µg/kg lipid in 51 out of 62 samples from the Breast Milk Banks in California and Texas (59). In a recent survey of pregnant Canadian women, 99% had detectable levels of TCS glucuronides and 80% had the unconjugated, free TCS form in their urine. Urinary TCS concentrations appeared to have increased with age and higher socioeconomic status (60). Geens et al. (61) reported that a large portion of the free TCS present in the human body is localized within the liver. A pilot study focusing on childhood exposures across major cities in the United States showed that two-thirds of 90 girls, aged 6–8 years old, exhibited detectable urinary TCS, ranging from 1.6 to 956.0 µg/L, indicating the prevalence of TCS exposure among youths (62). A risk assessment study conducted in a population of Swedish women reported that higher concentrations of TCS in milk and serum were correlated with the use of TCS-containing daily care products (63). By contrast, no significant plasma TCS concentrations were detected between a control group and a group exposed to TCS-containing personal care products in a study of 12 adult humans (64). In an epidemiology study exploring potential health effects of prenatal exposure to TCS on birth size, researchers reported no significant association (65).



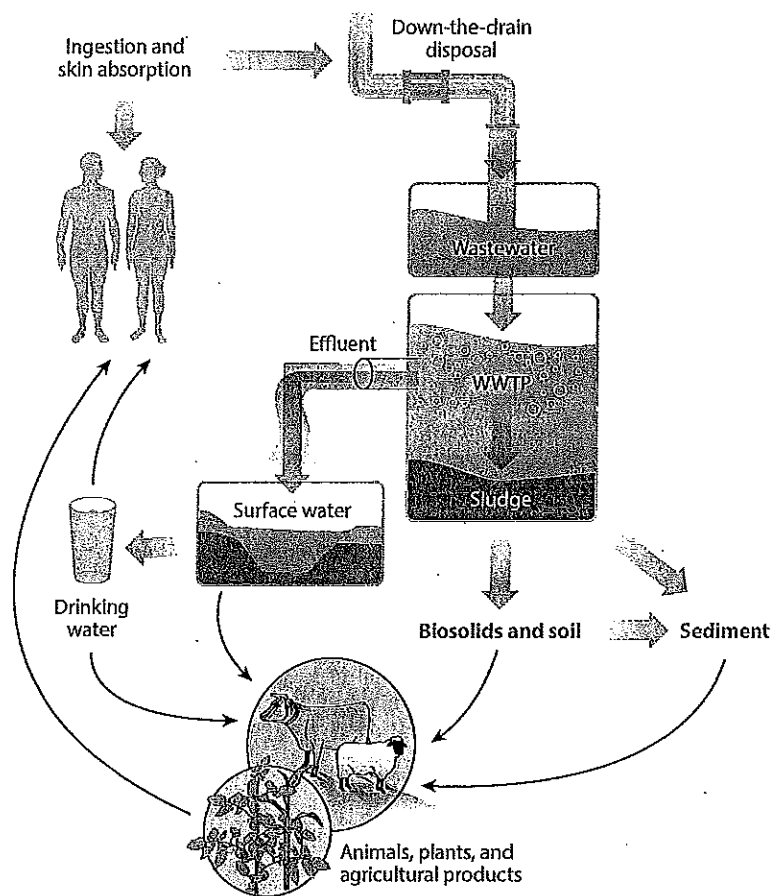


Figure 3

Fate and effects of TCS in the environment. Abbreviations: TCS, triclosan; WWTP, wastewater treatment plant.

By incorporating *in vitro* data on metabolic clearance and plasma protein binding activities, Rotroff et al. (66) established a population-based *in vitro*-to-*in vivo* extrapolation model to estimate the daily human oral dose (oral equivalent dose) of an array of environmental chemicals, including TCS. This dose can predict a steady-state concentration that is equivalent to *in vitro*  $AC_{50}$  (concentration at 50% of maximum activity) and the lowest effective concentration obtained from a wide range of high-throughput toxicity screening assays across multiple cellular pathways developed in the EPA ToxCast program (67). Among 35 chemicals screened, the highest estimated human oral exposures were generally well below the estimated oral equivalent doses. However, TCS was one of only two chemicals that had an estimated human oral exposure level (0.13 mg/kg/day) greater than an oral equivalent dose of 0.0117 mg/kg/day. These data challenge the safe use of TCS in humans and support the concept that the level of human TCS exposure is within the range at which significant *in vitro* bioactivity occurs. Figure 3 depicts the fate and effects of TCS in the environment and the potential routes of human exposure to TCS.

## BIOLOGICAL AND PHYSIOLOGICAL EFFECTS OF TCS IN EXPERIMENTAL ANIMAL MODELS

### Mutagenicity and Genotoxicity

Many independent studies have assessed the mutagenic potential of TCS and indicated that TCS is neither genotoxic nor mutagenic (68). A recent study reported that 0.5 mg/L TCS inhibited the vegetative growth of the unicellular alga *Closterium ehrenbergii* and produced DNA damage at 0.25 mg/L in the Comet assay (69). More recently, Binelli et al. (70) employed a battery of biomarkers to assess the genotoxicity and cytotoxicity of TCS in hemocytes of the freshwater zebra mussel. In both the single-cell gel electrophoresis assay and the micronucleus test, TCS induced significant DNA genetic damage at all tested concentrations (1, 2, and 3 nM) in a concentration-dependent fashion. These results suggest that although TCS is not genotoxic in most animal models, aquatic organisms are more susceptible to its genotoxic and mutagenic effects.

### Liver Disease and Carcinogenesis

When evaluated in chronic carcinogenesis studies in mice, rats, and hamsters, TCS treatment-related tumors were found in the liver of male and female mice with signs of hepatocyte hypertrophy and vacuolization (2). Researchers have proposed a few hypotheses linking TCS exposure to liver tumor development. Mice may be sensitive to TCS-activated peroxisome proliferator-type effects in the liver, although peroxisome proliferator actions are not considered a risk to human health. Another conjecture involves the hypothesis that in chlorine-treated tap water, TCS enhances the production of chloroform (24), which the EPA classifies as a probable human carcinogen. A link of TCS to dioxins—a family of compounds with widely ranging toxicities, including carcinogenesis and weakening of the immune system and reproductive function (71)—has been also suggested. TCS chlorinated by-products can produce 2,8-DCDD and 2,4-dichlorophenol following photochemical degradation by sunlight exposure, although one study argued that low concentrations of dioxin compounds would be formed owing to the low efficiency of the direct photolysis of TCS (72). These hypotheses remain speculative without concrete experimental evidence.

Through a long-term feeding study in mice, we recently discovered that TCS substantially accelerates hepatocellular carcinoma development, acting as a liver tumor promoter. Following diethylnitrosamine initiation, TCS-treated mice exhibited a large increase in tumor multiplicity, size, and incidence compared to control mice (21). By conducting a nuclear reporter activation assay using a series of mouse nuclear receptors, we showed that mouse PPAR $\alpha$  displayed insignificant activation in response to TCS, and we debated whether TCS exerts its hepatic proliferation independent from PPAR $\alpha$  activation, contrary to the previous suggestion (2). Through in vivo and in vitro experiments with a variety of biomarkers, we demonstrated that TCS enhances hepatocyte proliferation, induces fibrogenesis, produces oxidative stress, and promotes inflammatory responses (21). These results suggest that these modes of action that precede liver tumorigenesis may constitute the primary tumor-promoting mechanism through which TCS functions as a liver tumor promoter. In addition to the study conducted by this laboratory, a few recent studies, detailed below, addressed the potential mechanisms underlying TCS-mediated carcinogenesis.

**Oxidative stress.** Following TCS treatment in the diet, we found that increased levels of superoxide have been observed in the livers of TCS-treated mice. In addition, TCS-treated livers exhibited a marked increase in expression of oxidative stress responsive genes, including *heme oxygenase-1* (*Ho-1*), *NADPH hydroxylase quinone 1* (*Nqo-1*), and *glutathione S-transferase a1* (*Gsta1*),

indicating occurrence of oxidative stress (21, 73). In another similar study, TCS treatment in human hepatoma HepG2 cells led to the accumulation of 8-hydroxy-2-deoxyguanosine (8-OHdG), supporting the notion that TCS exposure contributes to the generation of oxidative stress (74). In the lysosomal membrane stability assay, Binelli et al. (70) demonstrated that severe TCS-induced DNA injuries in mussel hemocytes were linked to reactive oxygen species generation and oxidative stress. The concept that TCS exposure produces oxidative stress has also gained support from a recent study using a quantitative toxicogenomic-based toxicity assessment (75) in which toxicity changes during the degradation of TCS were evaluated by a Fenton-based process. The results showed that TCS caused severe oxidative stress as well as DNA stress. The authors indicated that the sustained TCS toxicity associated with oxidative stress was likely attributed, at least partially, to the production of 2,4-dichlorophenol—a chlorinated TCS by-product. When assessing the risk imposed by TCS in terrestrial organisms, studies of earthworms (*Eisenia fetida*) and snails (*Achatina fulica*) showed that the adverse effects of TCS on these organisms are associated with oxidative stress, as evidenced by the induction of oxidative stress responsive genes and increased content of malondialdehyde (76, 77). TCS dose-dependent DNA damage was also observed in earthworms, implying that TCS genotoxicity in this organism may be caused by oxidative stress (78).

**Epigenetic factors and epithelial-mesenchymal transition.** Ma et al. (74) demonstrated that TCS significantly reduced the level of global DNA methylation in human HepG2 cells and inhibited DNA methyltransferase 1 activity, implying that TCS may exert its tumorigenesis promotion ability by altering DNA methylation status, as global DNA hypomethylation is considered to be a biomarker of cancer progression (79). Using anoikis resistant human H460 lung cancer cells that reflect cancer aggressiveness as an experimental model, Winitthana et al. (80) discovered that TCS exposure predisposes lung cancer cells to undergo epithelial-mesenchymal transition (EMT), manifesting the mesenchymal phenotype. When cancer cells were treated with TCS at physiologically relevant concentrations, these cells exhibited decreased cell-to-cell adhesion and increased levels of biomarkers associated with EMT, inducing N-cadherin, Vimentin, Snail, and Slug, implying that TCS may promote EMT and increase the cells' migration, invasion, survival, and metastasis abilities (80).

**Cell proliferation and fibrogenesis.** Following 8-month TCS exposure at 800 ppm in the diet, we found that mice exhibited an increased liver to body weight ratio without affecting body weight, accompanied by elevated expression of gene markers associated with DNA synthesis and cell proliferation, including *Ki-67*, *c-Myc*, and *Cyclin D1* (21). The TCS-induced proliferative response was associated with increased expression of fibrogenic genes—*Collagen 1a1*, *smooth muscle alpha-actin* ( $\alpha$ -*Sma*), and *tissue inhibitor of metalloproteinase 1* (*Timp1*)—in livers as well as elevated levels of apoptosis. These results suggest that TCS causes chronic liver damage and hepatocyte apoptosis in mice, and surviving hepatocytes undergo compensatory proliferation and fibrogenesis with the regenerative capacity that hepatocytes possess (21). In a xenograft mouse model with injection of MCF-7 human breast cancer cells, exposure to TCS appeared to trigger the growth of breast cancer cells, leading to a significant increase in the development of breast tumor masses. MCF-7 cell proliferation following TCS treatment was accompanied by increased expression of *Cyclin D1* and decreased expression of *p21*, suggesting that TCS exposure is associated with the control of the G1/S transition of the cell cycle during cell proliferation in carcinogenesis (81). A similar study using ER-positive BG-1 ovarian cancer cells reported that TCS stimulated cell proliferation at a concentration of 1  $\mu$ M through an ER-dependent pathway (82). Treatment of BG-1 cells with TCS promoted cell cycle progression, as evidenced by upregulation of *Cyclin D1*, and suppressed apoptosis, as shown by a reduction in *p21* and Bax transcription and protein levels.

**Disturbance of immune function.** Scientists have long recognized a relationship between inflammation and cancer development (83). In the TCS-feeding experiments, TCS-treated mice exhibited an increase in liver inflammation, as shown by significantly higher expression levels of the proinflammatory cytokines tumor necrosis factor- $\alpha$  (Tnf- $\alpha$ ) and Il-6 (21). A recent epidemiology study investigated the ability of TCS to affect the immune system by using immune parameters in combination with a national cross-sectional survey conducted by the US Centers for Disease Control and Prevention in 2003–2006 (84). The study results showed that higher concentrations of urinary TCS were associated with a greater probability of having been diagnosed with allergies or hay fever in the <18-years-old age group. A recent study examined the effects of TCS on intracellular zinc concentrations, as zinc plays a critical role in proper immune function. Using a flow cytometer with appropriate probes, the researchers determined the correlation between elevated levels of intracellular zinc following TCS treatment and decreased levels of the thiol content in rat thymocytes. The results suggest that TCS at a dose of 1–3  $\mu$ M produced oxidative stress that depletes cellular thiol contents, leading to the disturbance of cellular Zn<sup>2+</sup> homeostasis (85). A study of TCS exposure using *in vitro* natural killer (NK) cells showed that TCS, at concentrations as low as 1  $\mu$ M with prolonged exposure (6 days), diminished the ability of human NK cells to lyse tumor cells, an essential function for inhibiting infected cells and tumors (86).

Currently, mechanism-based studies in humans are lacking in both number and scope. Our mouse model in the tumorigenesis study strongly suggests that adverse health effects—particularly enhanced liver fibrogenesis and tumor promotion—are associated with long-term TCS exposure. In addition, the aforementioned data in different experimental models collectively provide potential underlying mechanisms—oxidative stress, cell proliferation and fibrogenesis, epigenetic modification, and immune function disturbance—through which TCS exerts its effect on liver pathogenesis, carcinogenesis, or both. Although many of these animal studies used higher chemical concentrations than are predicted for human exposure, these mechanism-based studies are important, and their relevance to humans should be closely evaluated.

## Endocrine Disruption

The potential of TCS to act as an endocrine disruptor has been examined in different organisms, and many studies have reported reproductive and developmental toxicity and endocrine-disrupting effects of TCS in both *in vitro* and *in vivo* models. TCS has been shown to possess weak androgenic effects in fish (87) and antiandrogenic effects in rats (88). *In vitro* reporter assays using human breast cancer MCF-7 cells transfected with estrogen response element-containing plasmids revealed that TCS possessed antiestrogenic and antiandrogenic activities through interaction with ER $\alpha$ , ER $\beta$ , and the androgen receptor (AR). Acting as an antagonist, TCS inhibited the activity of these receptors when administered concomitantly with their endogenous ligands (89). Researchers further studied the endocrine disrupting potential of TCS by using *in vitro* cell-based assays consisting of nuclear receptor response elements to detect activities of the aryl hydrocarbon (Ah) receptor, ER, AR, and ryanodine receptors. Acting as both an Ah receptor agonist and antagonist, TCS not only induced luciferase expression to 40% of that of 2,3,7,8-TCDD induction but also inhibited 2,3,7,8-TCDD-induced luciferase expression by 30%. The authors also concluded that TCS antagonistically regulates ER and AR and is a potent disruptor of Ca<sup>2+</sup> regulation (90). In a study that analyzed TCS for its action on placental secretion of progesterone, estradiol, and  $\beta$ -human chorionic gonadotropin ( $\beta$ -hCG) in human choriocarcinoma-derived placental JEG-3 cells, TCS altered main placental hormone production by stimulating estradiol and progesterone secretion and reducing  $\beta$ -hCG at environmentally relevant doses in these cells (91).

Providing a comparison with the above in vitro studies, several in vivo studies determined that TCS functions as an ER agonist and exhibits estrogenic activity (92–94). TCS is reported to have estrogenic activity, as it increased the vitellogenin levels in male fish (92). Furthermore, TCS exposure led to an earlier onset of vaginal opening and an earlier age of the first estrus in female Wistar rats (93). Recent work by Jung et al. (94) tested the estrogenic activity of TCS by in vivo uterotrophic assays, and the results showed that uterine weight was significantly increased by TCS in the uteri of immature rats at doses as low as 7.5 mg/kg. In addition, expression of uterine CaPB-9k—a common biomarker regulated by estrogen in the uterus—is elevated following TCS treatment, indicating that TCS elicits estrogenic effects in rat uteri (94). Aside from involving the ER-dependent pathway, TCS can negatively modulate estrogen sulfotransferase, through which TCS exerts its estrogenic effects by inhibiting the metabolism of estrone and 17 $\beta$ -estradiol into their biologically inactive forms (95). Collectively, these results combine in vitro and in vivo data to put forward the idea that TCS possesses (anti)estrogenic and (anti)androgenic properties depending on species, tissues, and cell types.

Animal studies have made it evident that TCS acts as a thyroid-disrupting chemical. Recent work by Veldhoen et al. (96) examined the effects of TCS on the development of tadpoles of the North American bullfrog (*Rana catesbeiana*). TCS disrupted thyroid hormone-mediated action in the context of metamorphosis in tadpoles. Premetamorphic tadpoles displayed changes in growth and disruption of thyroid hormone-dependent gene expression following exposure to TCS concentrations as low as 0.15  $\mu$ g/L. Using in vitro *Xenopus laevis* XTC-2 cells, the researchers showed that exposure to environmentally relevant concentrations of TCS alters thyroid hormone-associated gene expression and disrupts developmental processes of *R. catesbeiana* and other anuran species. TCS-induced thyroid hormone alteration has also been demonstrated in *X. laevis* (97). A series of experiments with rats showed that TCS interfered with thyroid hormone by decreasing T4 levels in juvenile rats and that short-term oral TCS exposure caused hypothyroxinemia in weaning rats (10, 55, 98).

Using pregnant rats as an animal model, researchers found that TCS exhibited adverse effects on both thyroid homeostasis and reproductive function: TCS decreased serum triiodothyronine and T4 in pregnant rats, disrupted sex ratio balance, lowered pup body weights, and delayed vaginal opening in offspring (99). TCS markedly lowered maternal T4 levels in rat dams during gestation and lactation as well as in neonatal rats following perinatal exposures (100, 101). Based on its thyroid-disrupting properties, TCS is thought to be a potential developmental neurotoxicant because maternal hypothyroxinemia has been linked to impaired cognitive and motor function in children. TCS-induced hypothyroxinemia has been proposed to have these effects on children, as increased catabolism of thyroid hormone results from activation of xenobiotic nuclear receptors and subsequent upregulation of phase II conjugation enzymes (56). Although a direct linkage between nuclear receptor activation by TCS and increased levels of thyroid catabolism remains to be established in experimental studies, the murine knockout model has demonstrated previously that PXR and CAR are required for the downstream effects of pregnenolone-16 $\alpha$ -carbonitrile and phenobarbital on thyroid hormone elimination through glucuronidation (102). Researchers have conducted short-term (14 days) and long-term (4 years) studies to investigate possible adverse effects of 0.3% TCS in toothpaste on thyroid function in humans (64, 103). The results showed that TCS toothpaste had no detectable effect on thyroid function.

### Antimicrobials and TCS Resistance

Investigators have carried out many studies to identify a possible association between the increased use of TCS and the emergence of resistant bacterial strains. In 1991, Cookson et al. (104)

documented cross-resistance to TCS and mupirocin in MRSA. As the substrate for the AcrAB efflux pump in members of Enterobacteriaceae, TCS can be actively effluxed from the bacterial cell, which is believed to be one of the underlying mechanisms for TCS bacterial resistance (105). Recent work by Beier et al. (106) evaluated the antibiotic and antiseptic susceptibilities of vancomycin-resistant *Enterococcus faecium* (VRE). They reported no correlation between antibiotic resistance and antiseptic susceptibility; however, the majority of the VRE isolates examined had a substantially increased tolerance to TCS and were resistant to 14 antibiotics. Other researchers have detected an *S. aureus* strain tolerant of TCS with increased resistance to penicillin and gentamicin (107, 108). A study with mutants of serovar Typhimurium (*Salmonella enterica*) indicated that TCS at subinhibitory concentrations helps to retain certain antibiotic-resistant bacterial strains, although it does not increase the mutation frequency (109). By contrast, surveys evaluating TCS and antibiotic sensitivities found no relationship between TCS usage and antibiotic resistance (110, 111).

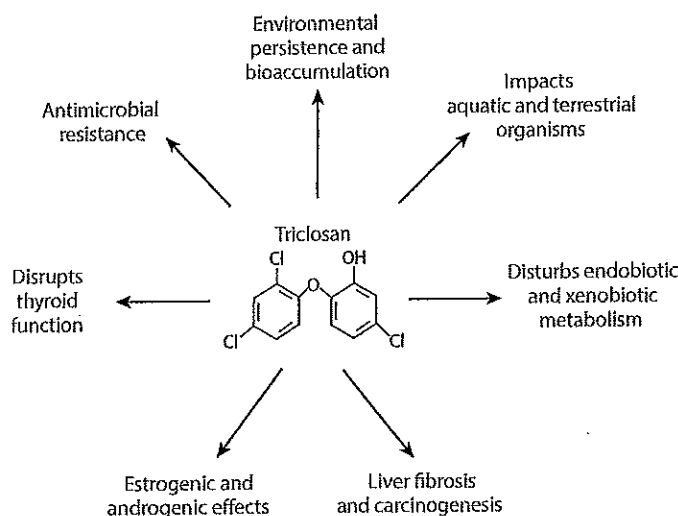
Although different bacterial strains have produced variants with reduced susceptibility to both TCS and antibiotics in laboratory settings (112, 113), no comprehensive environmental surveys have shown a causal relationship between TCS usage and antibiotic resistance. Recently, however, researchers demonstrated a significant correlation between sediment TCS concentrations and the proportion of cultivable benthic bacteria that were resistant to TCS in the environment (114). After testing rivers in the Chicago metropolitan region, Drury et al. (114) reported that urbanization is directly correlated with higher TCS levels and that the levels of TCS present in these streams affected the native bacterial communities. In another experimental setting with artificial streams, TCS caused a significant decrease in sediment bacterial diversity and modified the taxonomic composition of bacterial communities, with a great increase in relative abundance of cyanobacterial sequences and massive die-offs of algae. This work provides a direct link between TCS exposure and an increase in TCS resistance in bacterial communities. More research that monitors specific bacterial strains with reduced susceptibility to TCS and to antibiotics is necessary, and it is worth investigating whether ingested TCS would change the microbial composition and disrupt the homeostasis of gut flora in humans.

### Other Health Effects

A recent study conducted in primary mouse myotubes and myofibers showed that TCS adversely affects hemodynamic functions and cardiac and skeletal muscle contractility by interfering with signaling between the dihydropyridine and ryanodine receptors (115). Consistent with these results, when fathead minnows were used as a model for aquatic toxicity, researchers observed a negative impact on predator-avoidance performance in larvae and decreased activities in behavioral aggression assays (116).

The fibroproliferative property of TCS is not restricted to the liver. In a long-term (8 months) TCS feeding experiment in mice, we discovered that 8.3% of mice exposed to TCS developed renal hypertrophy, resulting in a marked change in the kidney structure with increased fibrous tissue contents, as evidenced by the accumulation of collagen in both the glomerulus and tubulointerstitium (Figure 4a,b) (21). Comparisons of gene expression also support the notion that TCS exposure promotes cell proliferation and fibrosis, indicated by elevated expression of the *Ki-67* gene and *Timp*,  $\alpha$ -*Sma*, *collagen 1a1*, and *Cd11b* in the kidneys of TCS-treated mice (Figure 4c). These changes were accompanied by inflammatory responses, assessed by alteration in proinflammatory cytokines. We found that expression of the cytokine genes *Tnf- $\alpha$*  and *Il-6* were greater in TCS-treated mice compared with control mice. Increased levels of inflammatory cell recruitment, characterized by both immunohistochemistry and gene expression of *Cd45*, were detected by both





**Figure 5**  
Environmental impacts and health issues surrounding triclosan.

real-time polymerase chain reaction (PCR) and immunostaining, further confirming the activation state of inflammatory responses (Figure 4e,f). Simultaneously, the fibrotic kidney induced by TCS exposure exhibited an increased number of apoptotic cells as detected by the TUNEL assay (Figure 4g). These results, together with the compelling evidence of liver fibrogenesis induced by TCS, indicate that TCS has a profound effect on organ fibrogenesis and proliferation.

## FINAL REMARKS

Washed down the drain, TCS amasses in sewage, trickles into the environment, and is potentially creating an environmental and public health hazard (Figure 5). Despite increasing research on the effects of TCS on human health, controversy surrounds the issue of what concentrations—if any—of TCS are safe for human use. The fact that significant levels of TCS are detected in urine, plasma, and breast milk in populations across the globe indicates the potential for humans in all age groups to receive lifetime exposures to TCS. Exposure to TCS can lead to a host of negative consequences: impaired thyroid function, endocrine disruption, developmental disorders, oxidative stress, liver carcinogenesis, and hindrance of muscle strength, among others. In mice, investigators have demonstrated conclusively that TCS exerts carcinogenic properties, potentially

**Figure 4**

TCS treatment induces kidney fibrosis in mice. Following 8-month treatment with a chow diet containing 0.08% TCS, 8.3% of mice developed kidney fibrosis. Comparisons were made between fibrotic ( $n = 3$ ) and nondiseased kidneys ( $n = 3$ ). (a) A normal (top) and enlarged fibrotic (bottom) kidney from TCS-treated mice. (b) Collagen deposition was examined by Sirius red staining (left and center) and its quantification (right). (c) Expression of *Ki-67* was determined by immunohistochemistry (left and center) and real-time PCR (right). (d) Expression of genes relevant to renal fibrosis, including *Collagen 1a1*, *Tgfb1*,  $\alpha$ -*Sma*, *Timp1*, and *Cd11b*, was detected by real-time PCR. (e) Expression of inflammatory genes, including *Tnfa* and *Il-6*, was assessed by real-time PCR. In addition, expression of CD45 was shown by immunostaining with the anti-CD45 antibody in liver sections (f) and quantitated by real-time PCR (g). Liver cell apoptosis was determined by TUNEL staining. Throughout the figure,  $P$  values  $< 0.05$  were considered statistically significant; one asterisk indicates a statistically significant difference of  $P < 0.005$ , and two asterisks indicate  $P < 0.0005$ . Abbreviations: PCR, polymerase chain reaction; TCS, triclosan. Parts of this figure adapted from Reference 21.



by promoting hepatocyte apoptosis, compensatory cell proliferation, and fibrogenesis. In addition, research has recently shown that TCS in the environment exerts selective pressure on exposed microorganisms, thereby altering the composition of the bacterial community (114). Although the causal relationship between TCS exposure and disturbance on physiological function and biological signaling pathways has been established in experimental animals, critics have questioned the relevance of these studies in predicting human TCS toxicity, partially owing to the higher-than-environmentally-relevant concentrations used in some of the aforementioned animal studies. Considering that we are exposed to hundreds of synthetic chemicals simultaneously, and TCS and many TCS-like chemicals (e.g., chlorinated hydrocarbons) coexist in the environment, we probably underestimate TCS toxicity by neglecting to consider the formation of TCS chlorinated derivative compounds and dioxins that may be more harmful and the potential synergistic effects manifested from TCS and TCS-like compounds. These facts, together with the bioaccumulative nature of TCS, strongly suggest that the health implications of long-term TCS exposure should be of concern and carefully evaluated.

Researchers recognize that biocides—including TCS—have an important role to play in disinfection, antisepsis, and preservation when used appropriately. In clinical settings, TCS has been employed to effectively eradicate microorganisms (4); however, the necessity of the pervasive use of TCS in many household consumer products is questionable. Researchers found that household soaps with less than 1% TCS were not significantly more effective than plain soaps when the efficacy was determined by overall bacterial counts (5). Another application of TCS as a biocide in consumer products is Microban, which is registered with the EPA to inhibit bacterial growth in plastic products, such as polyethylene films as packaging materials, enabling TCS to be incorporated into virtually any type of plastic materials used by the food packaging industry. In fact, the EPA has acted to prevent manufacturers from claiming that the use of TCS in such products provides protection against disease (117). For both hand soaps and food packaging materials, the risk associated with their long-term, daily use may not justify the benefit that manufacturers intended to accomplish, underscoring the fact that TCS is not subject to stringent government regulation.

As we indicate in this review, considerable evidence suggests that exposure to TCS can lead to changes in normal homeostasis in humans. Many years ago, the precautionary principle was invoked by the Danish Environment Agency, leading to restrictions on the use of phthalates as plasticizers in plastic toys for children (reviewed in Reference 118). There were far fewer convincing mechanistic data on phthalates linking exposure to toxicity than currently exist for the potential toxicological implications of TCS exposure. At the Wingspread Conference in 1998 (<http://www.sehn.org/wing.html>), the precautionary principle was defined. The precautionary principle states that “when an activity raises threats of harm to human health or the environment, precautionary measures should be taken even if some cause and effect relationships are not fully established scientifically” (120, p. 8). In 2014, the Minnesota legislature passed a bill that will restrict the use of TCS in most retail consumer products. The significant findings we report here demonstrate that TCS needs to be considered as a serious environmental toxicant that impacts the biology of many species in the environment and has the potential to negatively affect human health. In closing, the studies and data presented here are part of an effort aimed at raising the awareness of the public as well as alerting regulatory agencies to the adverse effects of TCS.

## DISCLOSURE STATEMENT

The authors are not aware of any affiliations, memberships, funding, or financial holdings that might be perceived as affecting the objectivity of this review.

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## Triclosan Exposure Increases Triclosan Resistance and Influences Taxonomic Composition of Benthic Bacterial Communities

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### Supporting Information

**ABSTRACT:** Triclosan (TCS) is a broad-spectrum antimicrobial compound that is incorporated into numerous consumer products. TCS has been detected in aquatic ecosystems across the U.S., raising concern about its potential ecological effects. We conducted a field survey and an artificial stream experiment to assess effects of TCS on benthic bacterial communities. Field sampling indicated that TCS concentrations in stream sediments increased with degree of urbanization. There was significant correlation between sediment TCS concentration and the proportion of cultivable benthic bacteria that were resistant to TCS, demonstrating that the levels of TCS present in these streams was affecting the native communities. An artificial stream experiment confirmed that TCS exposure could trigger increases in TCS resistance within cultivable benthic bacteria, and pyrosequencing analysis indicated that TCS resulted in decreased benthic bacterial diversity and shifts in bacterial community composition. One notable change was a 6-fold increase in the relative abundance of cyanobacterial sequences and a dramatic die-off of algae within the artificial streams. Selection of cyanobacteria over algae could have significant implications for higher trophic levels within streams. Finally, there were no observed effects of TCS on bacterial abundance or respiration rates, suggesting that bacterial density and function were highly resilient to TCS exposure.



### INTRODUCTION

Triclosan (TCS; 2,4,4'-trichloro-2'-hydroxydiphenyl ether, CAS 3380-34-5) is a broad-spectrum, synthetic antimicrobial compound that is incorporated into numerous consumer products including soaps, detergents, cleansers, toothpastes, and deodorants.<sup>1</sup> These products are widely used and there is growing concern about potential ecological effects of TCS because it has been detected in surface waters across the U.S.<sup>2–6</sup> and in Europe.<sup>7–11</sup>

TCS can be introduced to natural aquatic environments via domestic wastewater. Because TCS is incorporated into a wide variety of soaps and detergents, it will enter domestic wastewater through normal use, and several recent studies have confirmed the presence of TCS in domestic wastewater.<sup>4,12,13</sup> Municipal wastewater treatment plants (WWTPs) remove the majority of TCS from wastewater,<sup>4,10,12,13</sup> but removal is not complete, making it possible for WWTP effluent to provide a chronic low dose of TCS to aquatic ecosystems. Total annual loading of TCS into U.S. surface waters has been estimated at 5200–18 824 kg year<sup>−1</sup> with 50–56% coming from WWTP effluent.<sup>4</sup> Combined sewer overflows (CSOs), which release untreated wastewater during high rainfall events, could provide a more concentrated but sporadic dose of TCS to aquatic environments.<sup>4</sup> Finally, untreated wastewater

released from leaking sewer infrastructure<sup>14</sup> represents another possible route for TCS entry into aquatic ecosystems.<sup>4</sup> Within aquatic habitats, TCS is likely to accumulate in sediments, as it is a lipophilic compound with low aqueous solubility.<sup>4</sup> The aromatic nature of TCS and its high chlorine content indicate that it should resist degradation and persist in the environment,<sup>4</sup> and several studies have detected TCS in sediment cores >30 years old.<sup>11,15,16</sup>

TCS is toxic to bacteria via inhibition of the enzyme enoyl-ACP reductase, which is an essential component of the bacterial fatty acid biosynthetic pathway.<sup>17</sup> There is extensive data on TCS toxicity to pure bacterial cultures, but less is known about effects of TCS on bacterial communities in the environment.<sup>18</sup> Due to its antimicrobial properties, TCS may negatively affect the abundance and activity of benthic bacteria, which could have broader ecosystem-level implications because benthic bacteria are key drivers of nutrient cycling.<sup>19</sup> If bacterial taxa differ in TCS sensitivity, then TCS may also act as a selective agent and drive changes in bacterial community composition,

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which can impact function.<sup>20</sup> Finally, TCS negatively affects algal communities.<sup>18,21</sup> Although the mechanism of TCS toxicity to algae has not been identified,<sup>18</sup> some studies have suggested that algae may be more sensitive to TCS than bacteria.<sup>22</sup>

Bacteria exposed to TCS in the laboratory can develop resistance through mutations in the gene (*fabI*) that encodes the target enzyme,<sup>23</sup> through overexpression of *fabI*<sup>24</sup> or through efflux pumps.<sup>25</sup> The presence of TCS might also contribute to the spread of resistance genes, as exposure to antimicrobial agents can lead to increased rates of genetic exchange via <sup>26</sup>transformation<sup>26</sup> or conjugation.<sup>27</sup> Therefore, accumulation of TCS in sediments could increase prevalence of TCS resistance among resident bacterial communities. This is a concern as it may lead to a reduction in efficacy of TCS as an antimicrobial agent, but also because several studies have demonstrated a link between TCS resistance and resistance to antibiotics,<sup>28–30</sup> suggesting that TCS exposure may select for resistance to therapeutically useful antibiotics. Several studies have demonstrated the ability of cultured bacteria to develop TCS resistance based on TCS exposure in the lab,<sup>26–28</sup> but no studies have linked TCS exposure to resistance in the environment.

The goals of this project were (1) to determine if TCS in urban stream sediments is affecting the resident benthic bacterial communities; and (2) to determine experimentally if TCS exposure can influence the taxonomic structure, activity and TCS resistance of benthic bacterial communities. Results indicated that TCS exposure was linked to increased community TCS resistance in both field and laboratory experiments. Although TCS did not affect abundance of sediment bacterial communities or rates of respiration in the field or laboratory, an artificial stream experiment demonstrated that TCS exposure led to reductions in diversity and shifts in taxonomic composition of sediment bacterial communities, which could have significant implications for ecosystem function.

## MATERIALS AND METHODS

**Field Sites and Sampling.** North Shore Channel (NSC), which begins in Wilmette, IL, and extends into Chicago, IL, was selected to represent a highly urbanized river. NSC has a drainage area of 6474 ha that is 63% residential, 16.7% commercial/industrial, 10% forest/open land, 5.4% institutional, and 3.5% transportation/utility.<sup>31</sup> NSC receives treated effluent from North Side Water Reclamation Plant (NSWRP), an activated sludge plant that has an average flow of 245 million gallons per day (MGD) and a design capacity of 333 MGD. Effluent from NSWRP is not disinfected prior to release (www.mwrd.org). There are also 29 CSOs within the first 10 km of NSC. Two sampling sites on NSC were chosen. Urban site 1 (42.029496, -87.710032) is downstream of 25 CSO outfalls and is 950 m upstream of the NSWRP. Urban site 2 (42.021514, -87.710198) is 50 m downstream of NSWRP, and there are 4 additional CSOs between urban site 1 and site 2 (Figure S1 of the Supporting Information, SI).

West Branch DuPage River (WBDR), located in DuPage County, IL, was selected to represent a suburban river. WBDR has a drainage area of 32 900 ha that is 32.8% residential, 17.4% agricultural, 16.9% vacant, 11.2% forest/open land and less than 4% industrial.<sup>32</sup> Two sampling sites on WBDR were chosen, located upstream and downstream of West Chicago WWTP (WCWWTP), an activated sludge plant that treats 5 MGD and

does not disinfect effluent prior to release (www.westchicago.org). Suburban site 1 (41.866481, -88.189246) is 275 m upstream of the WCWWTP and approximately 9, 18, and 25 km downstream of three other suburban WWTPs that discharge to WBDR. Suburban site 2 (41.863812, -88.190416) is located 50 m downstream of WCWWTP. There are no CSOs that discharge to WBDR (<http://www.drscw.org/descriptions.html>).

Nippersink Creek (NC), a woodland stream located in McHenry County, IL, was selected to represent a stream with minimal urbanization. NC has a drainage area of 5,095 ha that is 7.8% residential, 63.1% agricultural, 2.1% vacant, 20.7% open land and 0.1% industrial (www.nippersink.org). Sediment samples were collected from one site on NC (42.417964, -88.344610). There are no WWTPs or CSOs on NC upstream of the site.

Five replicate sediment samples were collected from each of the five field sites between July and August 2010. Each sediment sample was a composite of 10 individual samples collected using a Petite Ponar Sampler (Wildlife Supply Company, Saginaw, MI). Samples were transported to the laboratory on ice and stored at 4 °C. Samples for TCS analysis were shipped on ice to Illinois Sustainable Technology Center (ISTC), Champaign, IL.

**Artificial Streams.** Artificial stream experiments were conducted from July through December 2011 using six fiberglass artificial streams (4 m × 15.5 cm × 15 cm) located in a greenhouse. Stream sediments were composed of 0.5 kg pea gravel, 9.5 kg sand, and 66.67 g each of red maple, ginkgo, and oak leaves that had been dried, shredded, and leached to remove tannins. This amount of leaf material was chosen to approximate the sediment organic matter concentration of the woodland field site. Streams were filled with 60 L dechlorinated tap water and refilled each week to compensate for evaporation. Current velocity in the streams was maintained at 0.18 m s<sup>-1</sup> by stainless steel paddlewheels. To provide an inoculum of microbes each stream was amended with 100 mL sediment from the woodland site. Streams were covered with shade cloth (50% light reduction) to limit algal growth. Streams were run for two months prior to TCS treatments to allow for colonization of sediments by microbes.

After the two month colonization period, three treatment streams were amended with TCS and three control streams received no TCS. The target was a TCS sediment concentration of 12 ppm, which represents 25% of the highest value reported in the literature.<sup>6</sup> To achieve this, we added to each stream the amount of TCS required to exceed the aqueous solubility of TCS (10 mg L<sup>-1</sup>)<sup>33</sup> by the amount needed to bring the sediment concentration to 12 ppm. Thus, 720 mg TCS (Kansai Chemicals, Tokyo, Japan) was dissolved in 25 mL of Dimethyl Sulfoxide (DMSO; Fisher, Pittsburgh, PA) and added to each of the treatment streams. While TCS concentrations measured in stream ecosystems are several orders of magnitude lower than 10 mg L<sup>-1</sup>,<sup>2</sup> this approach enabled us to achieve the targeted concentration in the artificial stream sediments. Control streams received 25 mL DMSO with no TCS. Sediment samples were collected from each stream immediately prior to dosing (day 0) and subsequently at approximately weekly intervals. Biological assays were conducted on the same day samples were collected. Sediment samples for TCS analysis were shipped on ice to ISTC.

**Measurement of TCS Concentration in Sediments.** A detailed explanation of the methods used for measurement of

TCS concentration in sediments is provided in the SI. Briefly, TCS was extracted from sediments by an accelerated solvent extraction (ASE) procedure with a Dionex ASE 300 system. Carbon-13 enriched TCS was spiked into all samples before extraction to allow isotope dilution calculations and correction for TCS loss. A Waters 2695 Separations Module coupled to Quattro Micro Tandem Mass Spectrometer was utilized for analysis.

**TCS Resistance of Bacterial Communities.** TCS resistance of bacterial communities was measured by heterotrophic plate counts on soy extract agar amended with  $16 \text{ mg L}^{-1}$  TCS. This concentration was chosen because it reduced growth of bacteria from the woodland field site by approximately 99% in a preliminary experiment. The percentage of bacteria resistant to TCS was determined by dividing counts obtained on TCS amended plates by counts obtained on unamended plates. Plate counts were performed by a standard method.<sup>34</sup>

**Epifluorescence Counts.** Direct counts of bacterial cells were performed using a modified standard method.<sup>35</sup> Cells were fixed by diluting sediment 1:50 in sterile fixative.<sup>36</sup> Samples were sonicated in an ultrasonic ice water bath for 1.5 min at 60 Hz and were then diluted 1:1000, 1:2000, and 1:4000 in filter-sterilized deionized water. Diluted samples (2 mL) were filtered in duplicate onto  $0.2 \mu\text{m}$  anodisc membrane filters (Whatman, Maidstone, U.K.) and stained with  $100 \mu\text{L}$  of SYBR Gold (Invitrogen, Carlsbad, CA). Cells were counted at 400 $\times$  magnification using an Olympus BH-2 Fluorescence Microscope (Olympus, Center Valley, PA). Cell numbers were normalized based on grams dry sediment.

**Microbial Respiration.** Respiration was measured for each sediment sample using a standard method.<sup>37</sup> Briefly, 10 mL of sediment was placed into a black 50 mL centrifuge tube filled to the top (no head space) with well water. Water temperature and initial dissolved oxygen (DO) were measured using YSI ProODO meter (YSI Inc., Yellow Springs, OH). Tubes were capped and incubated at  $25^\circ\text{C}$  in the dark for 2 h, after which final DO was measured and respiration rates were calculated. Respiration rates were normalized by sediment surface area.

**Bacterial Community Composition Analysis.** DNA was isolated from sediment samples using the UltraClean Soil DNA Kit (MoBio Laboratories, Carlsbad, CA) and sent to Research and Testing Laboratory (Lubbock, TX) for tag pyrosequencing of bacterial 16S rRNA genes. PCR amplification was performed using primers 530F and 1100R.<sup>38</sup> Sequencing reactions utilized a Roche 454 FLX instrument (Roche, Indianapolis, IN) with Titanium reagents. Sequences were processed using MOTHUR v.1.20.1,<sup>39</sup> as described previously,<sup>40</sup> and were grouped at the class level. The relative abundance of each bacterial class within each sample was imported into Primer software (Primer V.5, Primer-E Ltd., Plymouth, UK).<sup>41</sup> A similarity matrix was calculated using the Bray–Curtis coefficient<sup>41</sup> and nonmetric multidimensional scaling (nMDS) was used to ordinate the data. ANOSIM routine in Primer was used to assess differences between groups of samples. SIMPER routine in Primer was used to identify bacterial classes making the largest contributions to variations between communities. Diversity of communities was quantified based on inverse Simpson index.<sup>42</sup>

**Statistics.** Field data were analyzed by one-way ANOVA based on sampling location. When significant effects of location were observed pairwise comparisons were made by Tukey's post hoc HSD test. Correlations were assessed by determining Pearson product-moment correlation coefficients and Bonfer-

roni-corrected probabilities. Artificial stream data were analyzed by repeated measures ANOVA. When significant effects of sampling day were observed one-way ANOVA followed by Tukey's HSD test was used to compare data within treatments. Artificial stream data were log transformed prior to analysis to correct for unequal variances between treatments. Statistical analyses were run using Systat 13 (Systat Software, Inc., San Jose, CA) and  $p$  values less than 0.05 were considered to be significant.

## RESULTS

**Field Sites.** There was a significant effect of site on sediment TCS concentrations ( $p < 0.001$ ) with the highest concentrations occurring at sites with the highest degree of urbanization (urban > suburban > woodland) (Table 1). The

**Table 1. Triclosan Concentrations in Stream Sediments from Field Sites**

site	ng g <sup>-1</sup> a
urban site 1	$107 \pm 18.1a$
urban site 2	$33 \pm 11.0 b$
suburban site 1	$9 \pm 3.3 bc$
suburban site 2	$4 \pm 0.8 bc$
woodland site	$1 \pm 0.3 c$

<sup>a</sup>Limit of detection =  $1 \text{ ng g}^{-1}$ . Each data point represents mean value ( $n = 3$  to  $5$ )  $\pm$  standard error. ANOVA indicated a significant effect of site ( $p < 0.001$ ). Data followed by different letters are significantly different ( $p < 0.05$ ) based on Tukey's posthoc test.

sediment TCS concentration at urban site 1 was significantly higher than all of the other sites, most likely due to the high number of CSO outfalls upstream of this site. There were significantly lower sediment TCS concentrations at urban site 2 than at site 1, suggesting that effluent from the intervening WWTP plant might be contributing to lower sediment TCS concentrations at site 2. Although the mean TCS concentrations from the two suburban sites were not significantly higher than the woodland site (Table 1), TCS was detected more frequently at the suburban site (6 out of 8 samples) than at the woodland site (1 out of 4 samples), suggesting broader distribution of TCS at the suburban sites.

There was a significant effect of site on TCS resistance within sediment bacterial communities ( $p < 0.001$ ) with the sites with the highest degree of urbanization showing highest resistance (urban > suburban > woodland) (Figure 1A). There was also a significant correlation between sediment TCS concentration and TCS resistance ( $p < 0.001$ ) (Figure 1B), suggesting that TCS exposure may increase the relative abundance of TCS resistant bacteria within aquatic sediments. There was a significant effect of site on total counts of bacteria within sediments (data not shown;  $p = 0.002$ ) but there was not a significant correlation between TCS concentration and bacterial abundance ( $p = 0.485$ ; Figure S2A of the SI). Similarly, there was a significant effect of site on sediment respiration rates (data not shown;  $p = 0.005$ ) but there was not a significant correlation between TCS concentration and respiration rates ( $p = 0.523$ ; Figure S2B of the SI). These data indicate that TCS was not a significant driver of bacterial abundance or community respiration rates at these field sites.

Tag pyrosequencing of bacterial 16S rRNA genes was used to analyze taxonomic composition of sediment bacterial communities from field samples. After pretreatment, the data set

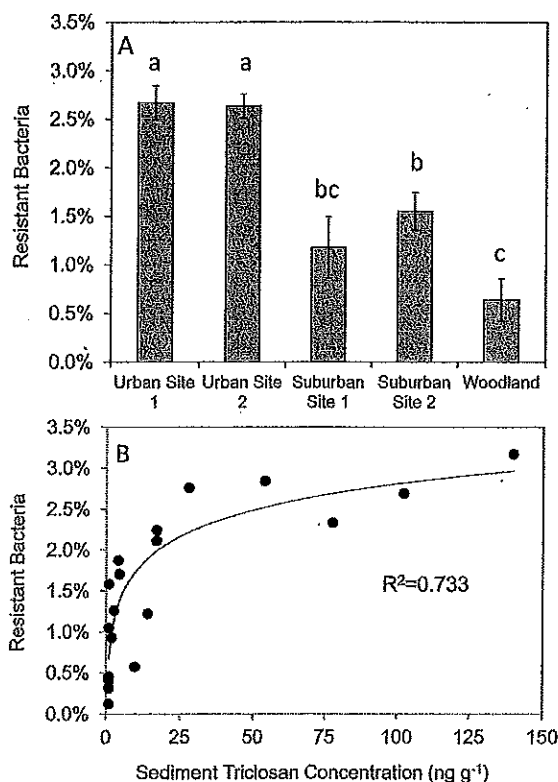


Figure 1. (A) Percentage of sediment bacteria resistant to triclosan for field samples. Each data point represents mean value ( $n = 5$ ) with standard error bars. ANOVA indicated a significant effect of location ( $p < 0.001$ ). Data points with different letters are significantly different based on Tukey's posthoc test ( $p < 0.05$ ). (B) Relationship between sediment triclosan concentration and percentage of sediment bacteria resistant to triclosan for field samples. Pearson correlation analysis indicated a significant correlation between concentration and resistance ( $p < 0.001$ ).

included a total of 214 711 high quality sequences for an average of 8588 sequences per sample. The predominant sequences were those representing the phyla Proteobacteria (48% of total sequences), Bacteroidetes (19%), and Chloroflexi (10%). Pyrosequencing data were analyzed by nMDS, and there was no relationship between overall community composition and TCS concentration (data not shown). There was also no correlation between TCS concentration and bacterial diversity (data not shown;  $p = 0.072$ ;  $R^2 = 0.177$ ).

**Artificial Stream Experiment.** TCS amendment resulted in a significant increase in sediment TCS concentrations within the artificial streams ( $p < 0.001$ ; Table 2). The average TCS concentration in treated streams was 7.9 ppm, which was slightly below our target concentration of 12 ppm. The highest TCS concentration was measured on day 7, but there was not a statistically significant difference in TCS concentration between day 7 and later sampling dates, indicating that the sediment TCS concentration remained stable over the course of the experiment. There was no significant effect of TCS amendment on numbers of bacteria within artificial stream sediments (Figure S3A of the SI) or community respiration rates (Figure S3B of the SI). However, TCS treatment did have a significant effect on the percentage of TCS resistant bacteria within sediments (Figure 2). Repeated measures ANOVA indicated a

Table 2. Triclosan Concentrations in Sediments from Artificial Streams ( $\mu\text{g g}^{-1}$ )<sup>a</sup>

day	control streams	triclosan streams
0	0.0022 a	0.0018 a
7	0.0040 a	17.3333 b
14	0.0175 a	8.0667 bc
19	0.0121 a	3.2667 c
28	0.0075 a	5.0333 bc
34	0.0076 a	5.7000 bc

<sup>a</sup>Limit of detection =  $1 \text{ ng g}^{-1}$ . Each data point represents mean value ( $n = 3$ ) with standard error values in parentheses. Triclosan streams received triclosan amendment on day 0 and control streams received no triclosan. Repeated measures ANOVA indicated a significant effect of treatment ( $p < 0.001$ ), a significant effect of sampling day ( $p < 0.001$ ) and a significant interaction effect ( $p < 0.001$ ). Data points with different letters represent significant differences in triclosan concentration over time within a treatment (control or triclosan) based on one way ANOVA ( $p < 0.05$ ).

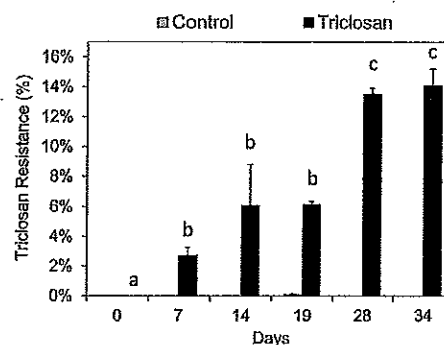


Figure 2. Percentage of sediment bacteria resistant to triclosan for artificial streams. Triclosan streams received a triclosan amendment on day 0 and control streams received no triclosan. Each data point is mean ( $n = 3$  streams)  $\pm$  standard error. Repeated measures ANOVA indicated a significant effect of triclosan ( $p < 0.001$ ). ANOVA for individual treatments indicated no significant change in control treatments over time ( $p = 0.626$ ) but a significant change in triclosan treatments over time ( $p < 0.001$ ) with different letters indicating significant differences between the sampling dates.

significant effect of TCS on resistance ( $p < 0.001$ ), with TCS treatments showing higher resistance than control streams for all days post-treatment. Repeated measures ANOVA also indicated a significant effect of sampling day on TCS resistance ( $p < 0.001$ ) and a significant treatment by day interaction ( $p < 0.001$ ). One-way ANOVAs indicated a significant effect of sampling day on resistance levels in TCS treated streams ( $p < 0.001$ ), with resistance levels increasing over time, whereas resistance levels in control streams showed no significant effect of sampling date ( $p = 0.626$ ).

Tag pyrosequencing of bacterial 16S rRNA genes was used to analyze taxonomic composition of sediment bacterial communities within artificial streams on days 0, 14, and 34. After pretreatment the data set included a total of 197 208 high quality sequences for an average of 10 956 sequences per sample. The number of bacterial classes observed per sample ranged from 60 to 78, with a mean of 70.3. Depth of coverage at the class level was calculated for each sample by dividing the total number of bacterial classes observed by the estimated total number of bacterial classes within each sample (calculated using the Chao1 richness estimator). The depth of coverage for the

samples ranged from 84 to 99% with a mean of 93.7%. The predominant sequences within all of the streams were those representing the phyla Chloroflexi (31% of total sequences), Proteobacteria (25%), and Bacteroidetes (25%), which were the same dominant groups as observed in the field sites. There was a significant effect of TCS amendment on bacterial community diversity ( $p < 0.05$ ), with TCS treated streams showing significantly lower diversity ( $p < 0.05$ ) than control streams at 14 and 34 days post-treatment (Figure S4 of the SI). nMDS ordination (Figure 3) and ANOSIM analysis of

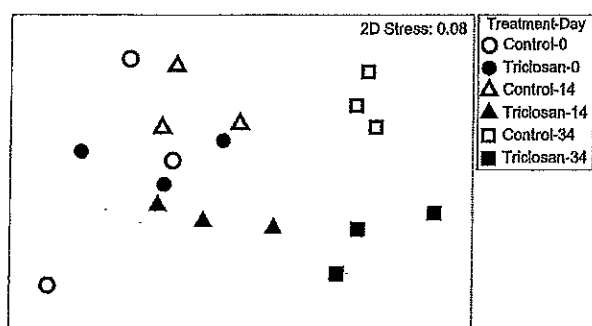


Figure 3. nMDS ordination of sediment bacterial communities from artificial streams on days 0, 14, and 34, based on tag pyrosequencing of bacterial 16S rRNA genes. Triclosan streams received a triclosan amendment on day 0 and control streams received no triclosan. Each data point represents one model stream on one sampling date.

pyrosequencing data indicated that there was no significant difference in bacterial community composition between TCS and control streams on day 0 ( $R = -0.222$ ,  $p = 0.9$ ), but there was a significant difference on day 14 ( $R = 0.667$ ,  $p = 0.10$ ) and a larger difference on day 34 ( $R = 0.815$ ,  $p = 0.10$ ). SIMPER analysis was used to identify bacterial taxa that made the most significant contributions to differences in bacterial community composition between TCS and control streams on day 34. Nine bacterial taxa accounted for 75% of the variation in bacterial community composition between TCS and control streams (Table 3) and there were statistically significant differences in relative abundances of sequences from several of these taxa. For example, sediment bacterial communities

Table 3. SIMPER Analysis of 16S Tag Pyrosequencing Data Indicating Bacterial Taxa Making the Most Significant Contributions to Differences in Community Composition between Day 34 Samples from Control and Triclosan Amended Artificial Stream Sediments

bacterial taxa	relative abundance (%)		p value	contribution to variation (%)
	control streams	triclosan streams		
<i>Anaerolineae</i>	25.92	34.73	0.038	21.27
<i>Sphingobacteria</i>	19.39	13.42	0.044	14.39
<i>Cyanobacteria</i>	0.94	5.55	0.034	11.61
<i>Betaproteobacteria</i>	5.11	2.46	0.002	6.39
<i>Flavobacteria</i>	6.15	7.61	0.354	5.13
<i>Deltaproteobacteria</i>	5.71	3.75	0.021	4.73
<i>Bacteroidia</i>	4.49	2.75	0.017	4.19
<i>Alphaproteobacteria</i>	4.99	4.07	0.478	4.00
<i>Gammaproteobacteria</i>	3.59	3.69	0.933	3.34

from TCS amended streams showed significantly higher relative abundances of sequences representing *Anaerolineae* and *Cyanobacteria*, and significantly lower relative abundances of sequences representing *Sphingobacteria*, *Betaproteobacteria*, *Deltaproteobacteria*, and *Bacteroidia* as compared to control streams.

**Comparison of Field and Artificial Stream Data.** On the basis of results of the artificial stream experiment, we went back to the pyrosequencing data from the field sites to determine if there were significant correlations between TCS concentrations and relative abundances of the bacterial groups that responded to TCS addition in artificial streams (those listed in Table 3). Only one of these groups, the *Gammaproteobacteria*, showed a significant correlation between relative abundance of sequences and sediment TCS concentration ( $p < 0.001$ ;  $R^2 = 0.7828$ ). Within *Gammaproteobacteria*, the predominant order in terms of sequence abundance was *Methylococcales*, and there was significant correlation between relative abundance of *Methylococcales* sequences and sediment TCS concentration ( $p < 0.001$ ;  $R^2 = 0.930$ ; Figure S5 of the SI). In artificial streams, there was no significant effect of TCS addition on relative abundance of *Methylococcales* sequences at day 34 ( $p = 0.191$ ). However, the relative abundance of *Methylococcales* sequences in artificial streams was 0.8%, which was much lower than the 6% relative abundance of *Methylococcales* sequences at urban site 1, but was similar to the 0.5% relative abundance at the woodland field site, which was the source of the microbial inoculum for the artificial streams.

## DISCUSSION

**Field Study.** TCS concentrations in stream sediments in the Chicago metropolitan region increased with degree of urbanization. There was a strong correlation between TCS concentrations in these sediments and relative abundance of TCS resistant bacteria, which provides strong support for the conclusion that the levels of TCS detected in these stream sediments were high enough to have a direct biological effect, specifically by creating a selective pressure favoring TCS resistant bacteria. Several studies have demonstrated the ability of cultured bacteria to develop TCS resistance based on TCS exposure in the lab,<sup>28–30</sup> but our work represents the first documented link between TCS exposure and an increase in TCS resistance in a complex bacterial community in the environment. It should be noted that the TCS resistance assay used in this study was limited to the cultivable fraction of the bacterial communities. While it is reasonable to hypothesize that the noncultivable fraction of the bacterial communities in these sediments might also have shown an increase in TCS resistance, further work would be needed to confirm this hypothesis.

There was no observed relationship between TCS concentration in stream sediments and either bacterial abundance, respiration rates or diversity. However, these field sites varied in multiple parameters, ranging from physical factors including depth and discharge to chemical factors including concentrations of DOC and inorganic nutrients. Therefore, it is not surprising that TCS was not the main driver of bacterial abundance, respiration or diversity at these sites. However, guided by the artificial stream results, we did detect a strong correlation between TCS concentration and relative abundance of *Methylococcales*. A recent study demonstrated that *Methylobacillus* was the predominant organism utilizing TCS as

a carbon source in an enrichment culture from activated sludge.<sup>43</sup> While *Methylococcales* (*Gammaproteobacteria*) and *Methylobacillus* (*Betaproteobacteria*) are not closely related phylogenetically, they are both methylotrophs. Methylotrophs, including species within the *Gammaproteobacteria*, have been shown to participate in cometabolism of a variety of environmental pollutants including chlorinated aliphatic and aromatic compounds through production of soluble methane monooxygenase.<sup>44,45</sup> Therefore, our data suggest that the observed correlation between TCS concentration and *Methylococcales* abundance may be related to degradation of TCS by these bacteria. However, since the field sites differ in a variety of parameters beyond TCS concentration, further research will be needed to test this hypothesis.

The position of urban site 1 downstream from 25 CSOs strongly implicates these CSOs as major sources of TCS, as has been suggested by others.<sup>4</sup> The sediment TCS concentration at urban site 2 was significantly lower than urban site 1, suggesting that the intervening WWTP was contributing to lower sediment TCS. Previously published data have demonstrated high efficiency of TCS removal by various WWTPs,<sup>4,10,13</sup> and 99% removal of TCS by NSWRP, specifically.<sup>44</sup> Therefore, these data indicate that at our urban site WWTP effluent is less of a contributor to sediment TCS concentrations than CSOs.

**Artificial Stream Experiment.** The goal of the artificial stream experiment was to determine whether experimental addition of TCS could influence the structure and function of sediment bacterial communities. The sediment TCS concentration in our artificial streams was approximately 15% of the highest sediment TCS concentration that has been reported in the literature,<sup>6</sup> which was measured in a stream in Baltimore, U.S. receiving direct sewage input due to a leaking sewer pipe (R. Halden, personal communication). Therefore, while the TCS concentration used in our artificial stream experiment was extremely high and is not typical of streams even in urban environments, this concentration is a good model for a dose that can result from a sewer infrastructure failure such as the one that occurred in Baltimore. The U.S. EPA has predicted that the percentage of U.S. wastewater pipes that will be in "poor," "very poor," or "life elapsed" conditions will increase from 23% in 2000 to 45% in 2020,<sup>46</sup> so sewer system failures such as the one observed in Baltimore are likely to become more common in the United States. In addition, this dose is a good model for the many areas of the world in which raw sewage is released to surface waters without treatment.

Within the artificial streams, we did not observe any impact of the high TCS concentration on bacterial cell abundance or community respiration rates. It is possible that 8 ppm TCS in the artificial stream sediments was not high enough to reduce bacterial abundance, but this seems unlikely as 16 ppm in agar resulted in dramatic reductions in bacterial growth. However, the TCS was likely more available in the agar than in the sediment, due to the strong binding between TCS and sediments. In addition, sediment is a much more complex matrix than agar and would likely lead to less uniform distribution of TCS, with TCS preferentially sorbing to organic matter, so it is likely that there were microsites within stream sediments that contained lower TCS and might have served as refuges for sensitive bacteria. Another possible explanation for the lack of an observed effect on bacterial cell abundance or respiration is that the first sampling of artificial streams did not occur until seven days after TCS addition, so there might have been a short-term bacterial response followed by a rapid

recovery. This possibility is supported by a mesocosm study that showed that TCS increased bacterial mortality within biofilms, but that bacterial numbers returned to baseline one week after exposure.<sup>47</sup> Further work will be needed to elucidate more clearly the short-term responses of sediment bacterial communities to TCS exposure, but our data suggest that sediment bacterial communities have a remarkable level of resilience.

Despite the lack of changes in overall bacterial community size or activity in the artificial streams in response to TCS, there were other significant biological responses to TCS. We measured a rapid and dramatic increase in relative abundance of TCS resistant bacteria in artificial stream sediments. Within the first week TCS resistance within the artificial streams was equivalent to the resistance level observed at our most contaminated field site. Over the course of the five week study, the TCS resistance level climbed to a maximum of 14%, suggesting that resistance levels in the field might also continue to rise if TCS concentrations increase. The increase in resistance that was observed in bacterial communities within artificial stream sediments could have been caused by *denovo* mutations conferring resistance, spread of existing TCS resistance genes through horizontal transfer, or a shift in community composition toward more TCS resistant taxa. While it is possible that all three of these mechanisms played a role in the increased resistance, we confirmed using pyrosequencing analysis of 16S rRNA genes that TCS addition did result in a significant shift in taxonomic composition of sediment bacterial communities. Previous studies have demonstrated shifts in bacterial community composition in response to TCS in biofilms<sup>48,49</sup> and WWTP effluent,<sup>50</sup> but we are not aware of any studies that have reported changes in bacterial community composition in response to TCS in freshwater sediments.

There was also a significant decrease in sediment bacterial diversity with TCS addition. A previous study indicated that TCS caused a decrease in diversity in a community of bacteria cultured from a sink drain and incubated in microcosms,<sup>51</sup> but we are not aware of any study that has demonstrated a negative effect of TCS on bacterial diversity under environmentally relevant conditions. The observed decrease in diversity raises concerns, as recent evidence demonstrates a link between diversity of phytoplankton communities in freshwater habitats and both stability and functioning of the communities.<sup>20</sup> Although a link between diversity and stability has not been established for benthic microbial communities, it suggests that further work is necessary to elucidate potential functional implications of these changes in diversity.

One of the specific population shifts we observed with TCS addition to artificial streams was a dramatic increase in relative abundance of cyanobacterial sequences, from less than 1% of the total community to more than 5%. Although we did not quantify algae in this experiment, we did note that TCS addition resulted in an immediate and clearly visible die-off of algae, and other studies have noted that TCS negatively affects algal communities.<sup>18,21</sup> These results suggest that cyanobacteria are more resistant to TCS than algae and that TCS may act as a selective factor favoring growth of cyanobacteria over algae. Pure culture studies have demonstrated that algae are more sensitive to TCS than cyanobacteria,<sup>47</sup> but we are not aware of any studies that have demonstrated this type of selection in a complex microbial community driven by TCS. Selection of cyanobacteria over algae could have significant ecological

implications as cyanobacteria are a less nutritious food for aquatic consumers (e.g., zooplankton) than algae<sup>52</sup> and many cyanobacteria produce toxins that negatively affect zooplankton,<sup>53</sup> so changes in relative abundance of cyanobacteria and algae in aquatic ecosystems could have significant effects on higher trophic levels.<sup>54</sup>

TCS addition also resulted in significant shifts in relative abundance of sequences representing several other bacterial taxa. For example, *Betaproteobacteria*, a bacterial class that is common in environmental samples, decreased in abundance in TCS-amended streams. Another recent study demonstrated a decrease in abundance of *Betaproteobacteria* in WWTP effluent,<sup>50</sup> suggesting that *Betaproteobacteria* may be especially sensitive to anthropogenic pollutants. Similarly, *Bacteroidia*, which are part of the *Bacteroidetes* phylum, decreased in abundance in TCS amended streams and a previous study demonstrated TCS sensitivity of *Bacteroidetes* within biofilms in laboratory mesocosms.<sup>55</sup> Therefore, our data indicate that TCS can act as a selective agent and modify the taxonomic composition of complex sediment bacterial communities under environmentally relevant conditions.

## ■ ASSOCIATED CONTENT

### ■ Supporting Information

A description of the methods used for measurement of TCS concentrations in sediments, two tables (S1 and S2) related to these methods, a map of the field sites (Figure S1) and four figures (Figures S2–S5) that present additional data collected in this study. This material is available free of charge via the Internet at <http://pubs.acs.org>.

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### Notes

The authors declare no competing financial interest.

## ■ ACKNOWLEDGMENTS

The authors acknowledge the technical assistance of Marty Berg and Timothy Hoellein and helpful comments on the manuscript provided by Domenic Castignetti and T. Hoellein.

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RESOLUTION NO. 2016026

RE: AMENDING THE 2016 ADOPTED COUNTY BUDGET  
AS IT PERTAINS TO THE DEPARTMENT OF  
BEHAVIORAL & COMMUNITY HEALTH (A.4320)

Legislators THOMES, BOLNER, STRAWINSKI, LANDISI, SAGLIANO, WASHBURN, HORTON, JETER-JACKSON, RIESER, and TRUITT offer the following and move its adoption:

WHEREAS, the Commissioner of Behavioral & Community Health has advised that New York State Office of Mental Health (OMH) has awarded through its State Aid Letter funding for fourteen additional supported housing bed slots to the County to replace beds due to the closure of "Our House" site operated by Rehabilitation Support Services, Inc., and

WHEREAS, the Commissioner of Behavioral & Community Health has also advised that OMH has awarded an additional ten supported housing bed slots to assist in state hospital diversion, and

WHEREAS, it is necessary to amend the 2016 Adopted County Budget to provide for the receipt and expenditure of these funds, now therefore, be it

RESOLVED, that the Commissioner of Finance is authorized, empowered and directed to amend the 2016 Adopted County Budget as follows:

APPROPRIATIONS

Increase

A.4320.42.4400.4466	Contract Agencies-Rehab (RSS)	\$184,030
A.4320.42.4412	Grant Project Costs	\$131,450

REVENUES


Increase

A.4320.42.34900.20	Mental Health-Rehab (RSS)	\$184,030
A.4320.42.34900.02	MH State Aid Claims	\$131,450

CA-014-16  
CRC/kvh/G-1652-B  
01/14/16  
Fiscal Impact: See attached statement

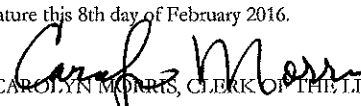
STATE OF NEW YORK  
COUNTY OF DUTCHESS

ss:

APPROVED  
  
MARCUS J. MOLINARO  
COUNTY EXECUTIVE  
Date 2/8/16

This is to certify that I, the undersigned Clerk of the Legislature of the County of Dutchess have compared the foregoing resolution with the original resolution now on file in the office of said clerk, and which was adopted by said Legislature on the 8th day of February 2016, and that the same is a true and correct transcript of said original resolution and of the whole thereof.

IN WITNESS WHEREOF, I have hereunto set my hand and seal of said Legislature this 8th day of February 2016.

  
CAROLYN MORRIS, CLERK OF THE LEGISLATURE

## FISCAL IMPACT STATEMENT

☐ NO FISCAL IMPACT PROJECTED

### APPROPRIATION RESOLUTIONS (To be completed by requesting department)

Total Current Year Cost \$ 315,480

Total Current Year Revenue \$ 315,480  
and Source

NYS OMH

Source of County Funds (check one): ☐ Existing Appropriations, ☐ Contingency,  
☐ Transfer of Existing Appropriations, ☐ Additional Appropriations, ☐ Other (explain).

Identify Line Items(s):

Related Expenses: Amount \$ 0

Nature/Reason:

Anticipated Savings to County: \$ 0

Net County Cost (this year): \$ 0  
Over Five Years: \$ 0

#### Additional Comments/Explanation:

NYS OMH has awarded 14 supported housing bed slots to Dutchess County to replace beds lost due to the closure of the "Our House" site operated by Rehabilitation Support Services, Inc., and has awarded 10 supported housing beds slots, to assist in state hospital diversion, to be awarded by RFP to the successful bidder.

Prepared by: Gerald A. Brisley, II, MBA

Prepared On: 1/12/16





Office of  
Mental Health

Aid to Localities Financial System

Attachment A

Funding Source Allocation Table

County Code: 14 County Name: Dutchess

Year: 2016

Print Date : 12/1/  
Printed By : GERA  
Page : 3 of 5

<u>Funding Source</u>	<u>Code</u>	<u>Type</u>	<u>Final Annualized Value</u>	<u>Allocation Changes Since Prior Letter</u>	<u>Revised Current Fiscal Year Allocation</u>	<u>Annualized Value</u>	<u>Annualized Value Changes</u>
Supported Housing	078	MHPFA	\$3,049,644	\$105,160	\$3,154,804	\$0	\$0
<b>Remarks</b>							
Adding 8 new beds as of 1/1/16 for forensic units for those coming out of State PC. Full annual value at \$13,145 per bed is \$105,160.							
Effective 7/1/15, adding 14 additional supported housing beds at \$13,145 per bed due to the closure of "Our House" (\$92,015 for two quarters). Full an 14 beds will be \$184,030.							
Effective 10/1/15 adding 10 supported housing beds designated for individuals from OMH PC units, OMH residential units, or discharges from an Article 28 or Article 28 & 31 closure Re-Invest. Current year addition is \$32,863. Full annual value of these beds at \$13,145 per bed is \$131,450.							
Effective April 1, 2015 adding \$200 per bed to increase rent stipends. The annual value of this stipend increase for 208 beds is \$41,600. The annual per bed model increases from \$12,945 to \$13,145.							
Includes \$62 increase per bed for supported housing for additional funding increase based on regional CFR data for direct care and direct care support salaries. per bed per year on 1/1/15 (6 months approval letter added here) and \$43 per bed per year on 4/1/15 (including clinical staff) result in a new per bed per year model of \$13,145.							
Expanded Community Support Adult	142A	MHPFA	\$200,000	\$668	\$200,668	\$0	\$0
<b>Remarks</b>							
Addition of \$668 (FAV) for transfer of 1.1.15 and 4.1.15 compensation enhancements to permanent funding codes, in accordance with LGU direction. Increases has been previously provided to OMH Field Offices and LGUs.							
Trans. Mgmt. Kendra's	170B	MHPFA	\$38,440	\$928	\$39,368	\$0	\$0
<b>Remarks</b>							
Addition of \$928 (FAV) for transfer of 1.1.15 and 4.1.15 compensation enhancements to permanent funding codes, in accordance with LGU direction. Increases has been previously provided to OMH Field Offices and LGUs.							
MGP Admin Kendra's	170C	MHPFA	\$13,956	\$0	\$13,956	\$0	\$0
Medication Grant Kendra's	170D	MHPFA	\$27,188	\$0	\$27,188	\$0	\$0
Article 28 & 31 Closure Re-Invest. (Adult)	175A	MHPFA	\$85,000	\$0	\$85,000	\$0	\$0
Adult Home Court Ordered / Nursing Home	178	MHPFA	\$1,118,156	\$0	\$1,118,156	\$0	\$0

## ***Family and Human Services Committee Roll Call***

<i>District</i>	<i>Name</i>	<i>Yes</i>	<i>No</i>
District 3 - Town of LaGrange	Borchert *	✓	
District 17 - Town and Village of Fishkill	Miccio*		
District 13 - Towns of LaGrange, East Fishkill, and Wappinger	Bolner *		
District 20 - Town of Red Hook	Strawinski*	<i>absent</i>	
District 14 - Town of Wappinger	Amparo*		
District 9 - City of Poughkeepsie	Rieser		
District 10 - City of Poughkeepsie	Jeter-Jackson (VC)		
District 16 - Town of Fishkill and City of Beacon	Forman		
District 18 - City of Beacon and Town of Fishkill	Landisi		
District 21 - Town of East Fishkill	Horton		
District 23 - Towns of Pawling, Beekman and East Fishkill	Thomes (C)		
District 25 - Towns of Amenia, Washington, Pleasant Valley	Washburn	<i>absent</i>	
Present: <u>10</u>	Resolution: <u>✓</u>	Total : <u>10</u>	<u>0</u>
Absent: <u>2</u>	Motion: <u>—</u>	Yes	No
Vacant: <u>0</u>		Abstentions: <u>0</u>	

**2016026** AMENDING THE 2016 ADOPTED COUNTY BUDGET AS IT PERTAINS TO THE DEPARTMENT OF BEHAVIORAL & COMMUNITY HEALTH (A.4320)

Date: February 4, 2016

# Roll Call Sheets

District	Last Name	Yes	No
District 3 - Town of LaGrange	Borchert		
District 17 - Town and Village of Fishkill	Miccio		
District 13 - Towns of LaGrange, East Fishkill, and Wappinger	Bolner		
District 20 - Town of Red Hook	Strawinski		
District 14 - Town of Wappinger	Amparo		
District 1 - Town of Poughkeepsie	Nesbitt		
District 2 - Towns of Pleasant Valley and Poughkeepsie	Sagliano		
District 4 - Town of Hyde Park	Black		
District 5 - Town of Poughkeepsie	Roman		
District 6 - Town of Poughkeepsie	Flesland		
District 7 - Towns of Hyde Park and Poughkeepsie	Truitt		
District 8 - City and Town of Poughkeepsie	Brendli		
District 9 - City of Poughkeepsie	Rieser		
District 10 - City of Poughkeepsie	Jeter-Jackson		
District 11 - Towns of Rhinebeck and Clinton	Tyner		
District 12 - Town of East Fishkill	Metzger		
District 15 - Town of Wappinger	Incoronato		
District 16 - Town of Fishkill and City of Beacon	Forman		
District 18 - City of Beacon and Town of Fishkill	Landisi		
District 19 - Towns of North East, Stanford, Pine Plains, Milan	Pulver		
District 21 - Town of East Fishkill	Horton		
District 22 - Towns of Beekman and Union Vale	Coviello		
District 23 - Towns of Pawling, Beekman and East Fishkill	Thomes		
District 24 - Towns of Dover and Union Vale	Surman		
District 25 - Towns of Amenia, Washington, Pleasant Valley	Washburn		

Present: 25      Resolution: ✓      Total : 25      0  
 Absent: 0      Motion: —      Yes      No  
 Vacant: 0      Abstentions: 0

**2016026** AMENDING THE 2016 ADOPTED COUNTY BUDGET AS IT PERTAINS TO THE DEPARTMENT OF BEHAVIORAL & COMMUNITY HEALTH (A.4320)

Date: February 8, 2016

RESOLUTION NO. 2016027

RE: AMENDING THE 2016 ADOPTED COUNTY BUDGET AS  
IT PERTAINS TO THE DEPARTMENT OF  
BEHAVIORAL & COMMUNITY HEALTH (A.4320)

Legislators THOMES, BOLNER, STRAWINSKI, LANDISI, SAGLIANO,  
WASHBURN, HORTON, JETER-JACKSON, RIESER, and TRUITT offer the following and  
move its adoption:

WHEREAS, the Commissioner of Behavioral & Community Health has advised  
that additional state aid from New York State Office of Alcoholism and Substances Abuse  
Services (OASAS) has been awarded for Council on Addiction Prevention and Education  
(CAPE), a contract agency, and

WHEREAS, this additional state aid is 100% pass through funding awarded to the  
contract agency as one time funding, and

WHEREAS, it is necessary to amend the 2016 Adopted County Budget to provide  
for the receipt and expenditure of these funds, now therefore, be it

RESOLVED, that the Commissioner of Finance is authorized, empowered and  
directed to amend the 2016 Adopted County Budget as follows:

APPROPRIATIONS

Increase

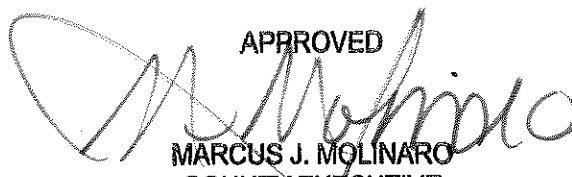
A.4320.42.4400.4443	Cont Ag – CAPE	\$100,000
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REVENUES

Increase

A.4320.42.34860.03	NARC. Cont CAPE	\$100,000
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CA-013-16  
CRC/kvh/G-1652-B  
1/13/16  
Fiscal Impact: See attached statement

APPROVED  
  
MARCUS J. MOLINARO  
COUNTY EXECUTIVE  
Date 2/9/2016

STATE OF NEW YORK

ss:

COUNTY OF DUTCHESS

This is to certify that I, the undersigned Clerk of the Legislature of the County of Dutchess have compared the foregoing resolution with  
the original resolution now on file in the office of said clerk, and which was adopted by said Legislature on the 8th day of February 2016, and that the  
same is a true and correct transcript of said original resolution and of the whole thereof.

IN WITNESS WHEREOF, I have hereunto set my hand and seal of said Legislature this 8th day of February 2016.

  
CAROLYN MORRIS, CLERK OF THE LEGISLATURE

## FISCAL IMPACT STATEMENT

☐ NO FISCAL IMPACT PROJECTED

### APPROPRIATION RESOLUTIONS (To be completed by requesting department)

Total Current Year Cost \$ 100,000

Total Current Year Revenue \$ 100,000  
and Source

NYS OMH

Source of County Funds (check one): ☐ Existing Appropriations, ☐ Contingency,  
☐ Transfer of Existing Appropriations, ☐ Additional Appropriations, ☐ Other (explain).

Identify Line Items(s):

Related Expenses: Amount \$ 0

Nature/Reason:

Anticipated Savings to County: \$ 0

Net County Cost (this year): \$ 0  
Over Five Years: \$ 0

#### Additional Comments/Explanation:

The NYS Legislature, through NYS OASAS, has awarded \$100,000 additional funding to Dutchess County, directed towards the Council on Addiction, Prevention and Education of Dutchess County (CAPE) for recovery outreach services for people in early phases of recovery.

Prepared by: GERALD A. BRISLEY, II, MBA

Prepared On: 1/8/16



**OASAS**

NEW YORK STATE  
OFFICE OF ALCOHOLISM & SUBSTANCE ABUSE SERVICES  
Improving Lives. *Addiction Services for Prevention, Treatment, Recovery*

Governor  
Andrew M. Cuomo

Commissioner  
Arlene González-Sánchez, M.S., L.M.S.W.

**Sent via email**

January 5, 2016

Margaret Hirst LCSW  
Acting Commissioner  
Dutchess County Department of Mental Hygiene  
230 North Road  
Poughkeepsie, NY 12601

Dear Ms. Hirst,

This serves to summarize the results and major issues of the 2016 Program Performance Review for Dutchess County. For your reference, I am also attaching a copy of the current 2015 and 2016 budget of records. Please note that the total state aid allocation for Dutchess County is \$2,089,465.

As you are aware, in this fiscal climate it is crucial that our providers know their approved budgets and state aid allocations and keep us advised of any significant changes.

Please be mindful that the 2016-17 State Budget has not yet been released, and therefore, final approved funding will be determined after the budget is passed.

Regarding the following programs:

- New Hope Manor, Inc.: Budgets have been pended for resubmission.
- Mid-Hudson Addiction Recovery Centers, Inc.: Provider's budget property line changed from 0 to \$173,560 in order to correctly display rents, with a corresponding change in revenue from Third Party to the "Federal Grant" line to appropriately demonstrate HUD rent reimbursement.
  - Program 347000 – State aid allocation is \$50,398
- Lexington Center for Recovery, Inc: Provider's approved budgets represent a second submission. Due to continued issues with gross unit cost at the Page Park Clinic (PRU#: 50577), provider was asked to re-submit budgets to bring costs for that clinic more in line with productivity. Expenses transferred from the Page Park Clinic (PRU#: 50577) to the Beacon Clinic (PRU#: 51777) which has shown increased productivity. Expenses and state aid transferred to the Main Street Clinic (PRU#: 52586). Additional state aid was also transferred to the Adolescent Pilot (PRU#: 52286) which has shown increased growth.
  - Program 352001 - State aid allocation is \$278,053.

- Program 352002 - State aid allocation is \$438,734.
  - Program 352003 - State aid allocation is \$259,987.
  - Program 352800 - State aid allocation is \$419,219.
- Council on Addiction, Prevention and Education of Dutchess County: New budget (PRU#:52914) set up for the legislative demonstration funds of \$100,000 for recovery outreach services for people in early phases of recovery. This grant is for a total of three years, beginning in 2015 and ending in 2017. Budget expenses re-aligned by provider and accepted as submitted.
- Program 081000 - State aid allocation is \$100,000.
  - Program 552000 - State aid allocation is \$262,706.
  - Program 555000 - State aid allocation is \$107,938.
- Dutchess County Department of Mental Hygiene: The LGU (PRU#: 70016) budget accepted as submitted except "other revenue" line was transferred to the local tax line. No change to vocational budget (PRU#: 52439).
- Program 089000: State aid allocation is \$105,594.
  - Program 407200: State aid allocation is \$66,836.

Please do not hesitate to contact me if you have any questions or need any additional information.

Sincerely,

*Mary Thomas*

Mary Thomas  
Program Manager  
(518) 485-0487  
[Mary.thomas@oasas.ny.gov](mailto:Mary.thomas@oasas.ny.gov)

Cc: G. Brisley  
K. Benshoff

## *Family and Human Services Committee Roll Call*

<i>District</i>	<i>Name</i>	<i>Yes</i>	<i>No</i>
District 3 - Town of LaGrange	Borchert *		
District 17 - Town and Village of Fishkill	Miccio*		
District 13 - Towns of LaGrange, East Fishkill, and Wappinger	Bolner *		
District 20 - Town of Red Hook	Strawinski*	<i>absent</i>	
District 14 - Town of Wappinger	Amparo*		
District 9 - City of Poughkeepsie	Rieser		
District 10 - City of Poughkeepsie	Jeter-Jackson (VC)		
District 16 - Town of Fishkill and City of Beacon	Forman		
District 18 - City of Beacon and Town of Fishkill	Landisi		
District 21 - Town of East Fishkill	Horton		
District 23 - Towns of Pawling, Beekman and East Fishkill	Thomes (C)		
District 25 - Towns of Amenia, Washington, Pleasant Valley	Washburn	<i>absent</i>	

Present:	<u>10</u>	Resolution:	<u>✓</u>	Total :	<u>10</u>	<u>0</u>
Absent:	<u>2</u>	Motion:	<u>—</u>		Yes	No
Vacant:	<u>0</u>			Abstentions:	<u>0</u>	

**2016027** AMENDING THE 2016 ADOPTED COUNTY BUDGET AS IT PERTAINS TO THE DEPARTMENT OF BEHAVIORAL & COMMUNITY HEALTH (A.4320)

Date: February 4, 2016



# Roll Call Sheets

District	Last Name	Yes	No
District 3 - Town of LaGrange	Borchert		
District 17 - Town and Village of Fishkill	Miccio		
District 13 - Towns of LaGrange, East Fishkill, and Wappinger	Bolner		
District 20 - Town of Red Hook	Strawinski		
District 14 - Town of Wappinger	Amparo		
District 1 - Town of Poughkeepsie	Nesbitt		
District 2 - Towns of Pleasant Valley and Poughkeepsie	Sagliano		
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District 6 - Town of Poughkeepsie	Flesland		
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District 10 - City of Poughkeepsie	Jeter-Jackson		
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District 12 - Town of East Fishkill	Metzger		
District 15 - Town of Wappinger	Incoronato		
District 16 - Town of Fishkill and City of Beacon	Forman		
District 18 - City of Beacon and Town of Fishkill	Landisi		
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District 21 - Town of East Fishkill	Horton		
District 22 - Towns of Beekman and Union Vale	Coviello		
District 23 - Towns of Pawling, Beekman and East Fishkill	Thomes		
District 24 - Towns of Dover and Union Vale	Surman		
District 25 - Towns of Amenia, Washington, Pleasant Valley	Washburn		

Present: 25

Resolution: ✓

Total : 25 0

Absent: 0

Motion:     

Yes No

Vacant: 0

Abstentions: 0

**2016027 AMENDING THE 2016 ADOPTED COUNTY BUDGET AS IT PERTAINS TO THE DEPARTMENT OF BEHAVIORAL & COMMUNITY HEALTH (A.4320)**

Date: February 8, 2016

## RESOLUTION NO. 2016028

RE: AMENDING THE 2016 ADOPTED COUNTY BUDGET  
AS IT PERTAINS TO THE SHERIFF (A.3110)

Legislators ROMAN, MICCIO, BOLNER, STRAWINSKI, PULVER, FLESLAND, LANDISI, SAGLIANO, WASHBURN, HORTON, JETER-JACKSON, NESBITT, and TRUITT offer the following and move its adoption:

WHEREAS, the Sheriff has advised that the NYS Division of Homeland Security and Emergency Services Grant that was received in 2014 has not been fully expended, and

WHEREFORE, the funds remaining can be used for surveillance equipment and crime scene tools as outlined by the grant, and

WHEREAS, in order to expend the remaining balance it is necessary to amend the 2016 Adopted County Budget to provide for the expenditure of said funds, now therefore, be it

RESOLVED, that the Commissioner of Finance is hereby authorized, empowered and directed to amend the 2016 Adopted County Budget as follows:


APPROPRIATIONSIncrease

A.3110.70.4412	Grant Project Costs	<u>\$49,824</u>
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REVENUESIncrease

A.3110.70.43200.05	Crime Control-Homeland	<u>\$49,824</u>
--------------------	------------------------	-----------------

CA-016-16  
kvh/G-0224  
01/13/16  
Fiscal Impact: See attached statement

APPROVED  
  
MARCUS J. MOLINARO  
COUNTY EXECUTIVE

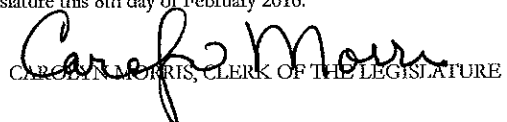
Date 2/9/2016

STATE OF NEW YORK  
COUNTY OF DUTCHESS

ss:

This is to certify that I, the undersigned Clerk of the Legislature of the County of Dutchess have compared the foregoing resolution with the original resolution now on file in the office of said clerk, and which was adopted by said Legislature on the 8th day of February 2016, and that the same is a true and correct transcript of said original resolution and of the whole thereof.

IN WITNESS WHEREOF, I have hereunto set my hand and seal of said Legislature this 8th day of February 2016.

  
CAROLYN MORRIS, CLERK OF THE LEGISLATURE

## FISCAL IMPACT STATEMENT

☒ NO FISCAL IMPACT PROJECTED

### APPROPRIATION RESOLUTIONS

(To be completed by requesting department)

Total Current Year Cost \$ 49,824

Total Current Year Revenue \$ 49,824  
and Source

Source of County Funds (check one): ☐ Existing Appropriations, ☐ Contingency,  
☐ Transfer of Existing Appropriations, ☒ Additional Appropriations, ☐ Other (explain).

Identify Line Items(s):

A.3110.70.4412 Grant Project Costs

A.3110.70.43200.05 Crime Control Homeland Security

Related Expenses: Amount \$ \_\_\_\_\_

Nature/Reason:

Anticipated Savings to County: \_\_\_\_\_

Net County Cost (this year): \_\_\_\_\_  
Over Five Years: \_\_\_\_\_

### Additional Comments/Explanation:

he Sheriff's Office Dept of Homeland Security FY14 Grant could not be fully expended by the end of 2015, request to appropriate \$49,824 to A.3110.70.4412 Grant Project Costs to complete spending.

Prepared by: Maureen Sarigianis

Prepared On: 1/6/2016

## Public Safety Roll Call

<i>District</i>	<i>Name</i>	<i>Yes</i>	<i>No</i>
District 3 - Town of LaGrange	Borchert*	✓	
District 17 - Town and Village of Fishkill	Miccio*		
District 13 - Towns of LaGrange, East Fishkill, and Wappinger	Bolner*		
District 20 - Town of Red Hook	Strawinski*		
District 14 - Town of Wappinger	Amparo*		
District 1 - Town of Poughkeepsie	Nesbitt (VC)		
District 4 - Town of Hyde Park	Black		
District 5 - Town of Poughkeepsie	Roman (C)		
District 6 - Town of Poughkeepsie	Flesland		
District 7 - Towns of Hyde Park and Poughkeepsie	Truitt		
District 8 - City and Town of Poughkeepsie	Brendli		
District 21 - Town of East Fishkill	Horton		

Present: 12

Absent: 0

Vacant: 0

Resolution: ✓

Motion:     

Total : 12 0

Abstentions: 0 Yes No

**2016028** AMENDING THE 2016 ADOPTED COUNTY BUDGET AS IT PERTAINS TO THE SHERIFF (A.3110)

Date: February 4, 2016

# Roll Call Sheets

District	Last Name	Yes	No
District 3 - Town of LaGrange	Borchert		
District 17 - Town and Village of Fishkill	Miccio		
District 13 - Towns of LaGrange, East Fishkill, and Wappinger	Bolner		
District 20 - Town of Red Hook	Strawinski		
District 14 - Town of Wappinger	Amparo		
District 1 - Town of Poughkeepsie	Nesbitt		
District 2 - Towns of Pleasant Valley and Poughkeepsie	Sagliano		
District 4 - Town of Hyde Park	Black		
District 5 - Town of Poughkeepsie	Roman		
District 6 - Town of Poughkeepsie	Flesland		
District 7 - Towns of Hyde Park and Poughkeepsie	Truitt		
District 8 - City and Town of Poughkeepsie	Brendli		
District 9 - City of Poughkeepsie	Rieser		
District 10 - City of Poughkeepsie	Jeter-Jackson		
District 11 - Towns of Rhinebeck and Clinton	Tyner		
District 12 - Town of East Fishkill	Metzger		
District 15 - Town of Wappinger	Incoronato		
District 16 - Town of Fishkill and City of Beacon	Forman		
District 18 - City of Beacon and Town of Fishkill	Landisi		
District 19 - Towns of North East, Stanford, Pine Plains, Milan	Pulver		
District 21 - Town of East Fishkill	Horton		
District 22 - Towns of Beekman and Union Vale	Coviello		
District 23 - Towns of Pawling, Beekman and East Fishkill	Thomes		
District 24 - Towns of Dover and Union Vale	Surman		
District 25 - Towns of Amenia, Washington, Pleasant Valley	Washburn		

Present: 25  
 Absent: 0  
 Vacant: 0

Resolution: ✓  
 Motion:     

Total : 25 0  
                     Yes       No  
 Abstentions: 0

**2016028** AMENDING THE 2016 ADOPTED COUNTY BUDGET AS IT PERTAINS TO THE SHERIFF (A.3110)

Date: February 8, 2016

RESOLUTION NO. 2016029

RE: REQUESTING THAT DUTCHESS COUNTY CRIMINAL JUSTICE  
COUNCIL EVALUATE COST AND FEASIBILITY OF PROVEN WAYS TO  
SAFELY LOWER INCARCERATION RATE IN DUTCHESS COUNTY JAIL

Legislators TYNER, AMPARO, RIESER, and BRENDLI offer the following and  
move its adoption:

WHEREAS, violent crime in Dutchess County has decreased over twenty percent over  
the last five years, and

WHEREAS, Dutchess County has not yet followed the Bronx example and expedited  
processing of inmates in our jail, 80% of which still haven't gone to trial yet here in our county,  
and

WHEREAS, Dutchess County has not yet seen how much our jail population can be cut  
by diverting mentally ill from arrest/jail after our new Crisis Intervention Training and Crisis  
Stabilization Center initiatives have been fully implemented; Miami and San Antonio saw huge  
cuts in incarceration from this (Miami at 40 percent), and

WHEREAS, Dutchess County has not yet followed the Tompkins  
County/Bronx/Brooklyn/Manhattan example of a bail loan fund for some accused of nonviolent  
misdemeanors, proven to save \$400,000 annually on incarceration costs in a county with a  
population less than a third of Dutchess County, and

WHEREAS, homeless Dutchess County residents repeatedly tried to commit minor  
crimes to purposely be arrested and jailed for "three hits and a cot", and

WHEREAS, African-Americans make up 12 percent of Dutchess County's population but  
37 percent of the population of the Dutchess County Jail; whites use drugs just as much as blacks  
but blacks are arrested six times more than whites for drug "crimes"; no effort has been made  
here in Dutchess County to address the disproportionate number of people of color incarcerated,  
and

WHEREAS, Dutchess County has not yet followed example of Gloucester, Cooperstown,  
and many other communities across the country who have lowered jail/prison populations by  
guaranteeing treatment instead of incarceration for heroin addicts, and

WHEREAS, Dutchess County has not yet followed the example of the Brooklyn District  
Attorney working collaboratively with the Drew House to make sure that, if possible, women

who have been arrested can have their children living with them in an alternative, rehabilitative setting, and

WHEREAS, Dutchess County has not yet made a commitment to divert nonviolent drug offenders from arrest and incarceration, even for possession of minor amounts of marijuana, though this has successfully been accomplished in New York City, along with decriminalizing other minor nonviolent misdemeanor offenses (that still carry a civil fee/fine/penalty there), and

WHEREAS, Dutchess County has not yet worked with state and city governments to restore the Drug Court to the City of Poughkeepsie, that for many years successfully ensured treatment instead of incarceration for nonviolent drug offenders, and

WHEREAS, Dutchess County has not yet initiated a Veterans Treatment Court to help deserving veterans avoid incarceration as in Columbia, Orange, Nassau, Suffolk, Albany, Rensselaer, Sullivan, and Monroe counties and in Westchester, Brooklyn, Queens, and the Bronx, and

WHEREAS, Dutchess County has not yet initiated a Parole Re-Entry Court similar to the successful one already up and running in Harlem, and Dutchess County has also failed to invest enough resources in a truly comprehensive, cost-saving, recidivism-cutting system of re-entry similar to Brooklyn's ComAlert system, recognized by both Harvard and The New York Times for its effectiveness in making sure those getting out of jail don't get locked up again, and

WHEREAS, Dutchess County has not followed the example of Brooklyn, Bronx, Seattle, San Bernardino, and many other municipalities who have enacted Mental Health Courts to divert nonviolent mentally ill from arrest and incarceration, and

WHEREAS, Dutchess County has not yet followed the innovative, cost-saving example of Genesee County and initiated a comprehensive restorative justice program to help some suitable, qualifying people who have been arrested and their victims as well, and

WHEREAS, Dutchess County Executive Marcus Molinaro promised in May 2014 to fully fund youth programs locally, but county funding has yet to be restored for the incredibly successful Youth Bureau Project Return program for at-risk teens, Big Brothers Big Sisters (or a similar program), or the Green Teen Program in Poughkeepsie through Cornell Cooperative Extension of Dutchess County, and

WHEREAS, Dutchess County has not sent a strong message to our state and federal governments, as the New York Times just editorialized recently, to follow the smart, safe, cost-saving Second Chance Society reforms to our criminal justice system already proven successful in Connecticut, as the bipartisan #Cut50, Coalition for Public Safety and the conservative Right on Crime coalition have called for, to cut the number of incarcerated across the country by fifty percent over the next ten years, and therefore be it

RESOLVED, that the Dutchess County Legislature requests that the Dutchess County Criminal Justice Council immediately evaluate the cost and feasibility of these sensible, proven

reforms to safely cut our jail population here in Dutchess County, and report back on them to the Dutchess County Legislature as soon as possible, and be it further

RESOLVED, that a copy of this resolution be sent to the Dutchess County Executive and Dutchess County Criminal Justice Council.

STATE OF NEW YORK  
COUNTY OF DUTCHESS

ss:

This is to certify that I, the undersigned Clerk of the Legislature of the County of Dutchess have compared the foregoing resolution with the original resolution now on file in the office of said clerk, and which was adopted by said Legislature on the 8th day of February 2016, and that the same is a true and correct transcript of said original resolution and of the whole thereof.

IN WITNESS WHEREOF, I have hereunto set my hand and seal of said Legislature this 8th day of February 2016.

CAROLYN MORRIS, CLERK OF THE LEGISLATURE



re: **CJC ANALYSIS OF BEST PRACTICES IN CRIMINAL JUSTICE REFORM**

☒ No Fiscal Impact

**FISCAL IMPACT STATEMENT**

**APPROPRIATION RESOLUTIONS**

Total Current Year Cost \$ 0

Total Current Year Revenue and Source: \$ 0

Source of County Funds (check one): Existing Appropriations  
Contingency  
Transfer of Existing Appropriations  
Additional Appropriations  
Other (explain)

Identify Line Item (s):  
Related Expenses:

Nature of Expenses:

Anticipated Savings to County:

[... might well avoid "need" for \$185M jail!]

Net county Cost (this year): \$ 0

(over five years): \$ 0

Additional Comments:

It would not be difficult  
or expensive to do this research—  
merely to reach out to other municipalities  
across NYS who have initiated  
state-of-the-art reforms in criminal justice  
not yet made reality here in Dutchess County.

# Public Safety Roll Call

District	Name	Yes	No
District 3 - Town of LaGrange	Borchert*	✓	
District 17 - Town and Village of Fishkill	Miccio*		
District 13 - Towns of LaGrange, East Fishkill, and Wappinger	Bolner*		
District 20 - Town of Red Hook	Strawinski*		
District 14 - Town of Wappinger	Amparo*		
District 1 - Town of Poughkeepsie	Nesbitt (VC)		
District 4 - Town of Hyde Park	Black		
District 5 - Town of Poughkeepsie	Roman (C)		
District 6 - Town of Poughkeepsie	Flesland		
District 7 - Towns of Hyde Park and Poughkeepsie,	Truitt		
District 8 - City and Town of Poughkeepsie	Brendli		
District 21 - Town of East Fishkill	Horton		

Present: 12  
 Absent: 0  
 Vacant: 0

Resolution:       
 Motion: ✓

Total: 12 0  
 Yes No  
 Abstentions: 0

C Brendli / MS

1<sup>st</sup> Whereas - delete<sup>all</sup> wording after  
 "years"

6<sup>th</sup> Whereas change 44 to 37

2016 029

2-4-16

# Public Safety Roll Call

District	Name	Yes	No
District 3 - Town of LaGrange	Borchert*	1	
District 17 - Town and Village of Fishkill	Miccio*	2	
District 13 - Towns of LaGrange, East Fishkill, and Wappinger	Bolner*	3	
District 20 - Town of Red Hook	Strawinski*		1
District 14 - Town of Wappinger	Amparo*		2
District 1 - Town of Poughkeepsie	Nesbitt (VC)	4	
District 4 - Town of Hyde Park	Black		3
District 5 - Town of Poughkeepsie	Roman (C)	5	
District 6 - Town of Poughkeepsie	Flesland	6	
District 7 - Towns of Hyde Park and Poughkeepsie	Truitt	7	
District 8 - City and Town of Poughkeepsie	Brendli		4
District 21 - Town of East Fishkill	Horton	8	

Present: \_\_\_\_\_

Resolution: \_\_\_\_\_

Total :

Absent: \_\_\_\_\_

Motion: \_\_\_\_\_

Yes  
Abstentions: 0

No

Vacant: \_\_\_\_\_

AF / JM

Call the question

2016029

2.4.16

## Public Safety Roll Call

<i>District</i>	<i>Name</i>	<i>Yes</i>	<i>No</i>
District 3 - Town of LaGrange	Borchert*		1
District 17 - Town and Village of Fishkill	Miccio*		2
District 13 - Towns of LaGrange, East Fishkill, and Wappinger	Bolner*		3
District 20 - Town of Red Hook	Strawinski*	1	
District 14 - Town of Wappinger	Amparo*	2	
District 1 - Town of Poughkeepsie	Nesbitt (VC)		4
District 4 - Town of Hyde Park	Black	3	
District 5 - Town of Poughkeepsie	Roman (C)		5
District 6 - Town of Poughkeepsie	Flesland		6
District 7 - Towns of Hyde Park and Poughkeepsie	Truitt		7
District 8 - City and Town of Poughkeepsie	Brendli	4	
District 21 - Town of East Fishkill	Horton		8

Present: 12

Resolution: ✓

Total: 4

Absent: 0

Motion: —

Yes

No

Vacant: 0

Abstentions: 0

*Defeated*

**2016029** REQUESTING THAT DUTCHESS COUNTY CRIMINAL JUSTICE COUNCIL  
EVALUATE COST AND FEASIBILITY OF PROVEN WAYS TO SAFELY LOWER  
INCARCERATION RATE IN DUTCHESS COUNTY JAIL

Date: February 4, 2016

RESOLUTION NO. 2016030

RE: AUTHORIZATION TO ACQUIRE A FEE ACQUISITION  
FROM KEITH SISCO & JEANINE COUTANT SISCO,  
IN CONNECTION WITH THE PROJECT KNOWN AS  
REPLACEMENT OF BRIDGES PP-2 AND PP-11,  
HOFFMAN ROAD OVER THE SHEKOMEKO CREEK,  
IN THE TOWN OF PINE PLAINS

Legislators PULVER, LANDISI, and SAGLIANO offer the following and move  
its adoption:

WHEREAS, the Department of Public Works has proposed the improvement of  
Bridges PP-2 and PP-11, Hoffman Road over the Shekomeko Creek, in the Town of Pine Plains,  
which project includes the acquisition in Fee of a 6,016+/- square foot parcel as shown on Map  
3, Parcel 1, Parcel Identification Number 134200-6872-00-350673-0000, to facilitate the  
construction, reconstruction and continued maintenance of Bridges PP-2 and PP-11 on Hoffman  
Road over Shekomeko Creek in the Town of Pine Plains; and

WHEREAS, the Department of Public Works has determined that the  
improvement project (1) constitutes a Type II action pursuant to Article 8 of the Environmental  
Conservation Law and Part 617 of the NYCRR ("SEQRA"), and (2) will not have a significant  
effect on the environment, and

WHEREAS, it is the purpose of this Legislature in adopting this resolution to  
adopt and confirm the findings of the Department of Public Works, and

WHEREAS, the Department of Public Works has made a determination that in  
order to maintain said bridge, it is necessary to acquire a portion of real property which is located  
at Hoffman Road, in the Town of Pine Plains, presently owned by Keith Sisco and Jeanine  
Coutant Sisco, and

WHEREAS, the total purchase price to acquire in Fee the 6,016+/- square foot  
parcel as shown on Map 3, Parcel 1, is \$2,900.00, and,

WHEREAS, a proposed Agreement to Purchase Real Property between the  
County and the property owner is annexed hereto, and

WHEREAS, the Commissioner of Public Works has recommended that the fee  
acquisition for the sum of \$2,900.00, plus an authorization to spend up to \$1,000.00 in related  
expenses; NOW, therefore, be it

RESOLVED, that this Legislature hereby adopts and confirms the determination  
of the Dutchess County Department of Public Works that the project, including the acquisition of  
the property described in the aforesaid Agreement in the Town of Pine Plains, will not have a  
significant effect on the environment, and be it further

RESOLVED, that the County Executive or his designee is authorized to execute the Agreement to Purchase Real Property in substantially the same form as annexed hereto along with any other necessary documents in connection with this acquisition, and be it further

RESOLVED, that on the submission by the property owner of a deed for the fee acquisition to the aforementioned lands, which shall include the terms and conditions of the Agreement to Purchase Real Property, and such other documents as may be necessary to convey free and clear title to the County of Dutchess, that payment be made to the property owner in the sum of \$2,900.00 for the fee acquisition. In addition, the County is authorized to spend up to \$1,000.00 in related expenses and necessary filing fees for such conveyance.

CA-015-16

CAB/kvh/R-0956-D

01/12/16

Fiscal Impact: See attached statement

APPROVED

MARCUS J. MOLINARO  
COUNTY EXECUTIVE

Date 2/9/2016

STATE OF NEW YORK

ss:

COUNTY OF DUTCHESS

This is to certify that I, the undersigned Clerk of the Legislature of the County of Dutchess have compared the foregoing resolution with the original resolution now on file in the office of said clerk, and which was adopted by said Legislature on the 8th day of February 2016, and that the same is a true and correct transcript of said original resolution and of the whole thereof.

IN WITNESS WHEREOF, I have hereunto set my hand and seal of said Legislature this 8th day of February 2016.

CAROLYN MORRIS, CLERK OF THE LEGISLATURE

## FISCAL IMPACT STATEMENT

☐ NO FISCAL IMPACT PROJECTED

### APPROPRIATION RESOLUTIONS (To be completed by requesting department)

Total Current Year Cost \$ 3,900

Total Current Year Revenue \$ \_\_\_\_\_  
and Source

Source of County Funds (check one): ☒ Existing Appropriations, ☐ Contingency,  
☐ Transfer of Existing Appropriations, ☐ Additional Appropriations, ☐ Other (explain).

Identify Line Items(s):

Related Expenses: Amount \$ 1,000  
Nature/Reason:

Anticipated Savings to County: \_\_\_\_\_

Net County Cost (this year): \$3,900  
Over Five Years: \_\_\_\_\_

### Additional Comments/Explanation:

Replacement of Bridges PP-2 and PP-11, Hoffman Road Over Shekomoko Creek, Town of Pine Plains, Dutchess County

This Fiscal Impact Statement pertains to the accompanying resolution request for authorization to acquire in Fee a 6,016 +/- Square Foot parcel as shown on (Map 3, Parcel 1) with the purchase price of \$2,900.00, from Keith Sisco and Jeanine Coutant Sisco.

Related expenses in the amount of \$1,000 are included in the Total Current Year Costs.

Prepared by: Matthew W. Davis

Prepared On: 1/6/16

**ADVANCE PAYMENT AGREEMENT TO PURCHASE REAL PROPERTY**

Project: Dutchess Co. Bridge PP-2 -- Hoffman Road over Shekomoko Creek PIN: n/a Map No.: 03 Parcel No.: 1

This Advance Payment Agreement by and between KEITH SISCO and JEANINE COUTANT SISCO hereinafter referred to as "Seller", and the COUNTY OF DUTCHESS, hereinafter referred to as "Buyer", pertains to that real property interest ("real property interest") to be required for public right of way purposes only.

1. **PROPERTY DESCRIPTION.** The Seller agrees to sell, grant, convey:

☒ All right, title and interest to 6,016± square feet of real property (of which 887± square feet is under water)

☐ A permanent easement over ± square feet of real property

☐ A temporary easement over ± square feet of real property

Located at 10-11 Hoffman Road, Town of Pine Plains, Dutchess County, New York, further described as:

Being a portion of those same lands described in that certain deed dated August 2, 1989 and recorded June 6, 1990 in Liber 1866 at Page 798 in the Office of the County Clerk for Dutchess County, New York (Tax Map No. 6872-00-350673), and being the same lands designated as parcel 1 on Exhibit "A", attached hereto.

2. **IMPROVEMENTS INCLUDED IN THE ACQUISITION.** The following improvements, if any, now in or on the property are included in this Advance Payment Agreement: firewood/erosion control.

3. **PURCHASE PRICE.** Whereas, the Seller and the Buyer cannot agree upon the value of the real property interest and the legal damages, the Buyer is willing to pay an amount equal to the amount determined by the Buyer to be the market value of the real property interest to be acquired and the legal damages. This amount is TWO THOUSAND, NINE HUNDRED AND 00/100 DOLLARS (\$2,900.00). This price includes the real property interest described in Paragraph one (1) and the improvements described in Paragraph two (2). The Seller agrees, as a prerequisite to such advance payment, to execute and to deliver or cause the execution and delivery to the Buyer all formal papers which the Buyer deems necessary to authorize payment and to secure to the Buyer a full release of all claims (other than the claim of the Seller) by reason of the acquisition of the aforementioned real property interest with improvements.

4. **PAYMENT.** Payment is to be made upon approval of this agreement by the Buyer after authorization by appropriate administrative and legal entities, as may be required by statute and after Buyer has provided all papers necessary to convey clear title and release all third party claims to the advance payment proceeds.

5. **CLAIM.** The Seller hereby reserves the right to file a claim with the Supreme Court, held in the judicial district where the real property is situated, or if a claim has been filed, reserves the right to prosecute said claim, it being understood, however, that any such claim shall be filed within three (3) year after title to the aforementioned real property interest is conveyed. It is agreed that, if the Supreme Court finds the value of the real property interest acquired is equal to or exceeds the advance payment amount, the amount of such advance payment shall be deducted from the amount so found by the court or, in the alternative, the award of said court shall be in the amount of the excess, if any, over and above the advance payment amount. In the event the amount so found by the court is less than the amount of said advance payment, the Buyer, upon application made to the court on at least eight days notice to the Seller, may request the difference between the award as found by the court and the amount of said advance payment. This Paragraph 5 of this Advance Payment Agreement shall not merge into the deed and shall survive the conveyance of the aforementioned real property interest.

6. **FILING.** It is understood and agreed by and between the parties hereto, that pursuant to statute, if no claim is filed by the Seller in the Supreme Court within one (1) year after title to the aforementioned real property interest is conveyed, then, upon the expiration of that time, this Advance Payment Agreement shall automatically become a Purchase

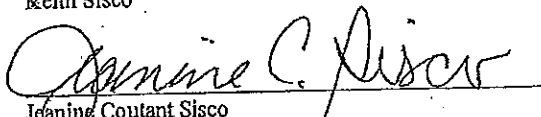


Agreement in full and complete settlement of all claims without further ratification, approval or consent by Seller and Seller shall be deemed to have released Seller's claim against the Buyer.

7. TITLE DOCUMENTS. Buyer will provide the following documents in connection with the transfer of title:
- A. Title Documents. Buyer will prepare and deliver to the Seller for execution at the time of closing all documents necessary to convey the real property interest stated in Paragraph one (1) above.
  - B. Abstract, Bankruptcy and Tax Searches, and Acquisition Map. Buyer will pay for a search of public deeds, court and tax records and will prepare a Title Search Certification Letter. Buyer will pay for and furnish to the Seller an acquisition map.
8. MARKETABILITY OF TITLE. Buyer shall pay for curative action, as deemed necessary by the Buyer, to insure good and valid marketable title in fee simple and/or permanent easement to the property. Such curative action is defined as the effort required to clear title, including but not limited to attending meetings, document preparation, obtaining releases and recording documents. The Seller shall be responsible for the cost to satisfy liens and encumbrances identified by the Buyer. Said cost shall be deducted from the amount stated in paragraph three (3), and paid to the appropriate party by the Buyer.
9. RECORDING COSTS, TRANSFER TAX & CLOSING ADJUSTMENTS. Buyer will pay all recording fees and the real property transfer tax. The following, as applicable and as deemed appropriate by the Buyer, will be prorated and adjusted between Seller and Buyer as of the date of conveyance: current taxes computed on a fiscal year basis, excluding delinquent items, interest and penalties; rent payments; current common charges or assessments.
10. RESPONSIBILITY OF PERSONS UNDER THIS AGREEMENT; ASSIGNABILITY. The aforesaid terms, agreements and understandings shall bind and shall inure to the benefit of the heirs, executors, administrators, successors and assigns of the parties hereto.
11. ENTIRE AGREEMENT. This Advance Payment Agreement when signed by both the Buyer and the Seller will be the record of the complete Advance Payment Agreement between the Buyer and Seller concerning the condemnation of the property. No verbal agreements or promises will be binding.
12. NO TICES. All notices under this Advance Payment Agreement shall be deemed delivered upon receipt. Any notices relating to this Advance Payment Agreement may be given by the attorneys for the parties.
13. ADDENDA. The following Addenda are incorporated into this Advance Payment Agreement:  
☐ Cost to Cure ☐ Other \_\_\_\_\_

IN WITNESS WHEREOF, on this 7 day of December 20 15, the parties have entered into this Advance Payment Agreement.

  
Keith Sisco

  
Jeanine Coutant Sisco

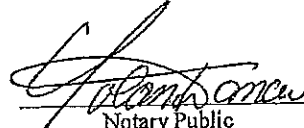
COUNTY OF DUTCHESS

By: \_\_\_\_\_  
Print Name: \_\_\_\_\_  
Title: \_\_\_\_\_

(14)

STATE OF NEW YORK )  
COUNTY OF DUTCHESS ) ss.:

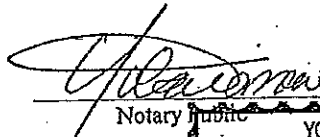
On this 7 day of December, 2015, before me, the undersigned, a Notary Public in and for said state, personally appeared KEITH SISCO, personally known to me or proved to me on the basis of satisfactory evidence to be the individual whose name is subscribed to the within instrument and acknowledged to me that he executed the same in his said capacity, and that by his signature on this instrument, the individual, or the person upon behalf of which the individual acted, executed the instrument.

  
Notary Public

YOLANDA D LANARI  
Notary Public - State of New York  
NO. 01LA4869104  
Qualified in Dutchess County  
My Commission Expires Jul 28, 2018

STATE OF NEW YORK )  
COUNTY OF DUTCHESS ) ss.:

On this 7 day of December, 2015, before me, the undersigned, a Notary Public in and for said state, personally appeared JEANINE COUTANT SISCO, personally known to me or proved to me on the basis of satisfactory evidence to be the individual whose name is subscribed to the within instrument and acknowledged to me that she executed the same in her said capacity, and that by her signature on this instrument, the individual, or the person upon behalf of which the individual acted, executed the instrument.

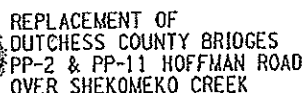
  
Notary Public

YOLANDA D LANARI  
Notary Public - State of New York  
NO. 01LA4869104  
Qualified in Dutchess County  
My Commission Expires Jul 28, 2018

STATE OF NEW YORK )  
COUNTY OF DUTCHESS ) ss.:

On this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_, before me, the undersigned, a Notary Public in and for said state, personally appeared \_\_\_\_\_, personally known to me or proved to me on the basis of satisfactory evidence to be the individual whose name is subscribed to the within instrument and acknowledged to me that he executed the same in his said capacity, and that by his signature on this instrument, the individual, or the person upon behalf of which the individual acted, executed the instrument.

\_\_\_\_\_  
Notary Public



'EXHIBIT A'  
COUNTY OF DUTCHESS  
DEPARTMENT OF PUBLIC WORKS  
ACQUISITION MAP

MAP NO. 3  
PARCEL NO. 1, 2, & 3  
SHEET 1 OF 4 SHEETS

ORIGINALS OF THIS MAP (SHEETS 1, 2, 3, & 4)  
ARE ON FILE AT THE OFFICES OF THE  
DUTCHESS COUNTY DEPARTMENT OF  
PUBLIC WORKS.

JEANINE COUTANT SISCO  
& KEITH SISCO  
( REPUTED OWNERS ) .

CCO L. 1866 P. 79B

MAP REFERENCE INFORMATION:

FM 6589 4-21-83

PARCEL SUMMARY:

Type: P\* 2 : TE

Page 3 of 4

PA 1 : FEE

Portion of	Tax
------------	-----

Map Ref. No. 350673-0000

Town of PINE PLAINS

County of BUTCHESS

State of New York

Parcel Locator Points:

**FREE**

N: 1152764.883  
E: 720819.544

TE 1

N: 1152764.883  
E: 720819.883

TE 2

N: 1152647.869  
E: 720821.912

LANDS N/F  
KYLE PATCHIN  
DOC. #02 2010 3910

TEMPORARY  
EASEMENT

M 3  
P 2

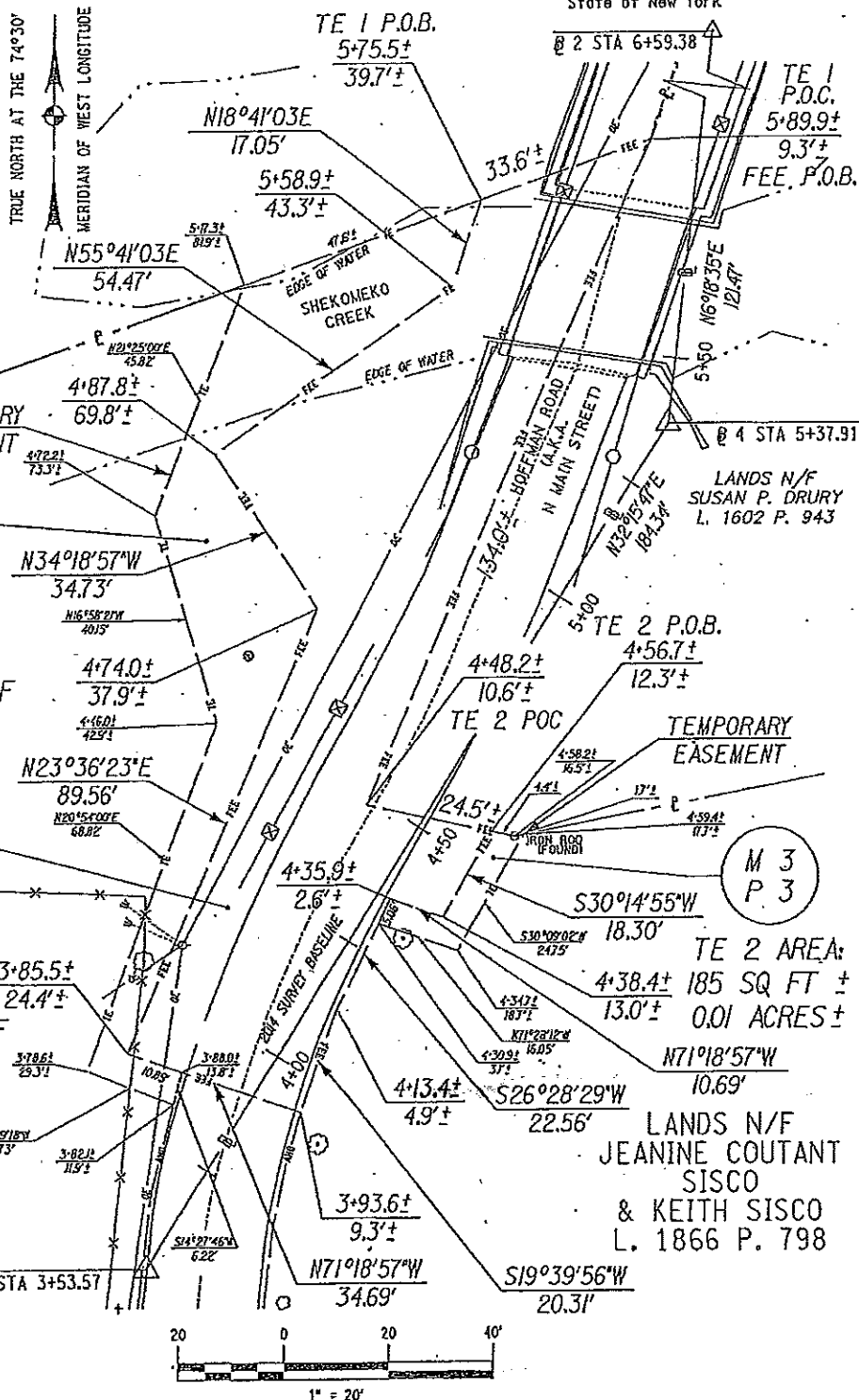
TE 1 AREA:  
2557 SQ FT ±  
0.06 ACRES ±  
966 SQ FT ± OF  
WHICH IS  
UNDER WATER

M 3  
P 1

FEE AREA:  
6016 SQ FT.  $\pm$   $\frac{3 \cdot 85.5 \pm}{24.4 \pm}$   
0.14 ACRES  $\pm$   
887 SQ FT  $\pm$  OF  
WHICH IS  $\frac{3 \cdot 861}{25.3 \pm}$   
UNDER WATER

TE 2 AREA:  
185 SQ FT ±  
0.01 ACRES ±

LANDS N/F  
JEANINE COUTANT  
SISCO  
& KEITH SISCO  
L. 1866 P. 798



EXPLORED BY

USED BY

FINAL DED 81

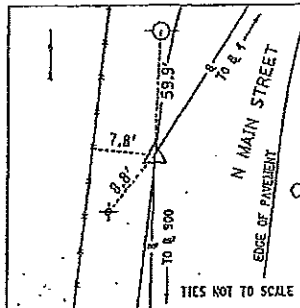


REPLACEMENT OF  
DUTCHESS COUNTY BRIDGES  
PP-2 & PP-11 HOFFMAN ROAD  
OVER SHEKOMOKO CREEK

'EXHIBIT A'  
COUNTY OF DUTCHESS  
DEPARTMENT OF PUBLIC WORKS  
ACQUISITION MAP

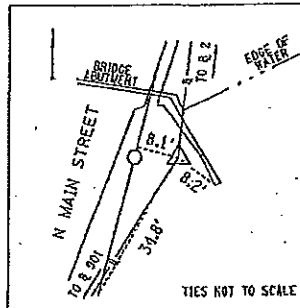
MAP NO. 3  
PARCEL NO. 1, 2, & 3  
SHEET 2 OF 4 SHEETS

ORIGINALS OF THIS MAP (SHEETS 1, 2, 3, & 4)  
ARE ON FILE AT THE OFFICES OF THE  
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PUBLIC WORKS.



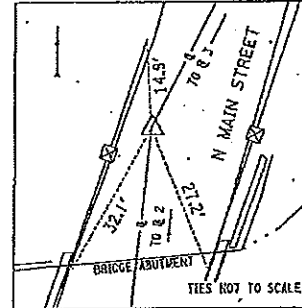
CBP 901 STA. 3+53.57  
NAG H&L 0.3'-/- EAST OF THE WEST  
EDGE OF PAVEMENT

H 1152567.2515  
E 720755.4323  
EL 426.93



CBP 4 STA. 5+37.91  
CIR SET 10'-/- EAST OF EAST EDGE  
OF PAVEMENT

H 1152723.1320  
E 720854.8351  
EL 417.6



CBP 2 STA. 6+59.38  
NAG H&L 5'-/- EAST OF WEST EDGE  
OF PAVEMENT

H 1152043.8685  
E 720868.1854  
EL 409.67

MAP AND DESCRIPTION OF LAND TO BE ACQUIRED BY THE COUNTY OF DUTCHESS  
FROM

JEANINE COUTANT SISCO  
& KEITH SISCO  
( REPUTED OWNER )

FOR THE RE-CONSTRUCTION OF HOFFMAN ROAD

Parcel 1

All that certain piece or parcel of land, lying westerly and easterly of Hoffman Road (aka North Main Street), in the Town of Pine Plains, County of Dutchess, State of New York and being more particularly bounded and described as follows:

Beginning at a point in the centerline of Hoffman Road (aka North Main Street), at its intersection with the property division line between lands now or formerly of Susan P. Drury, on the east and lands now or formerly of Jeanine Coutant Sisco and Keith Sisco, on the west, said point being 9.3± feet distant westerly from Station 5+89.9± of the hereinafter described survey baseline for the reconstruction of Hoffman Road over the Shekomoko Creek; thence southwestwesterly, along said property division line, a distance of 134.0± feet to a point, said point being 10.6± feet distant westerly from Station 4+48.2± of said baseline; thence southeasterly, continuing along said property division line, a distance of 24.5± feet to a point, said point being 12.3± feet distant westerly from Station 4+56.7± of said baseline; thence through said lands of Jeanine Coutant Sisco and Keith Sisco the following nine (9) courses and distances:

1. South 30°14'55" West, a distance of 18.30 feet to a point, said point being 13.0± feet distant easterly from Station 4+38.4± of said baseline,
2. North 71°18'57" West, a distance of 10.69 feet to a point, said point being 2.6± feet distant easterly from Station 4+35.9± of said baseline,
3. South 26°28'29" West, a distance of 22.56 feet to a point, said point being 4.9± feet distant easterly from Station 4+13.4± of said baseline,
4. South 19°39'56" West, a distance of 20.31 feet to a point, said point being 9.3± feet distant easterly from Station 3+93.6± of said baseline,
5. North 71°18'57" West, a distance of 34.69 feet to a point, said point being 24.4± feet distant westerly from Station 3+85.5± of said baseline,
6. North 23°36'23" East, a distance of 89.56 feet to a point, said point being 37.9± feet distant westerly from Station 4+74.0± of said baseline,
7. North 34°18'57" West, a distance of 34.73 feet to a point, said point being 69.8± feet distant westerly from Station 4+87.8± of said baseline,
8. North 55°41'03" East, a distance of 54.47 feet to a point, said point being 43.3± feet distant westerly from Station 5+58.9± of said baseline, and
9. North 18°41'03" East, a distance of 17.05 feet to a point, at its intersection with the property division line between said lands of Kyle Patchin, on the north and lands now or formerly of Jeanine Coutant Sisco and Keith Sisco, on the south, said point being 39.7± feet distant westerly from Station 5+75.5± of said baseline; thence easterly, along said property division line, a distance of 33.6± feet to the point or place of beginning and being 6,016± square feet or 0.14 acres of lands, more or less, 887 sq. ft. ± of which is under water.



REPLACEMENT OF  
DUTCHESS COUNTY BRIDGES  
PP-2 & PP-11 HOFFMAN ROAD  
OVER SHEKOMOKO CREEK

'EXHIBIT A'  
COUNTY OF DUTCHESS  
DEPARTMENT OF PUBLIC WORKS  
ACQUISITION MAP

MAP NO. 3  
PARCEL NO. 1, 2, & 3  
SHEET 3 OF 4 SHEETS

ORIGINALS OF THIS MAP (SHEETS 1, 2, 3, & 4)  
ARE ON FILE AT THE OFFICES OF THE  
DUTCHESS COUNTY DEPARTMENT OF  
PUBLIC WORKS.

Two (2) temporary easements to be exercised in, on or over the property now or formerly of Jeanine Coutant Sisco and Keith Sisco for the purpose of reconstructing Hoffman Road (aka North Main Street), over the Shekomoko Creek and appurtenances for use and exercisable during the reconstruction of Hoffman Road (aka North Main Street), over the Shekomoko Creek, and terminating upon the approval of the completed work, unless sooner terminated if deemed no longer necessary for highway purposes and released by the County of Dutchess or other authorized representative acting for the County of Dutchess or its assigns. Such easement shall be exercised in and to all the piece or parcel of property lying westerly and easterly of Hoffman Road (aka North Main Street), in the Town of Pine Plains, County of Dutchess, State of New York and being more particularly bounded and described as follows:

Parcel 2

Commencing at a point in the centerline of Hoffman Road (aka North Main Street), at its intersection with the property division line between lands now or formerly of Kyle Patchin, on the north and lands now or formerly of Jeanine Coutant Sisco and Keith Sisco, on the south, said point being 9.3± feet distant westerly from Station 5+89.9± of the hereinafter described survey baseline for the reconstruction of Hoffman Road over the Shekomoko Creek; thence southwesterly, along said property division line, a distance of 33.6± feet to the Point or Place of Beginning, said point being 39.7± feet distant westerly from Station 5+75.5± of said baseline; thence through said lands of Jeanine Coutant Sisco and Keith Sisco the following ten (10) courses and distances:

1. South 18°41'03" West, a distance of 17.05 feet to a point, said point being 43.3± feet distant westerly from Station 5+58.9± of said baseline,
2. South 55°41'03" West, a distance of 54.47 feet to a point, said point being 69.8± feet distant westerly from Station 4+87.8± of said baseline,
3. South 34°18'57" East, a distance of 34.73 feet to a point, said point being 37.9± feet distant westerly from Station 4+74.0± of said baseline,
4. South 23°36'23" West, a distance of 89.56 feet to a point, said point being 24.4± feet distant westerly from Station 3+85.5± of said baseline,
5. South 71°18'57" East, a distance of 10.89 feet to a point, said point being 13.8± feet distant westerly from Station 3+88.0± of said baseline,
6. South 14°27'46" West, a distance of 6.22 feet to a point, said point being 11.9± feet distant westerly from Station 3+82.1± of said baseline,
7. North 69°19'18" West, a distance of 17.73 feet to a point, said point being 29.3± feet distant westerly from Station 3+78.6± of said baseline,
8. North 20°54'00" East, a distance of 68.82 feet to a point, said point being 42.9± feet distant westerly from Station 4+46.0± of said baseline,
9. North 16°58'21" West, a distance of 40.15 feet to a point, said point being 73.3± feet distant westerly from Station 4+72.2± of said baseline, and
10. North 21°25'00" East, a distance of 45.82 feet to a point, at its intersection with the property division line between said lands of Kyle Patchin, on the north and said lands of Jeanine Coutant Sisco and Keith Sisco, on the south, said point being 81.9± feet distant westerly from Station 5+17.3± of said baseline; thence easterly, along said property division line, a distance of 47.6± feet to the point or place of beginning and being 2,557± square feet or 0.06 acres of lands, more or less, 966 sq. ft. ± of which is under water.

Parcel 3

ALSO Commencing at a point in the centerline of Hoffman Road (aka North Main Street), at its intersection with the property division line between lands now or formerly of Susan P. Drury, on the east and lands now or formerly of Jeanine Coutant Sisco and Keith Sisco, on the west, said point being 10.6± feet distant westerly from Station 4+48.2± of the hereinafter described survey baseline for the reconstruction of Hoffman Road over the Shekomoko Creek; thence southeasterly, along said property division line, a distance of 24.5± feet to the Point or Place of Beginning, said point being 12.3± feet distant easterly from Station 4+56.7± of said baseline; thence easterly, continuing along said property division line, a distance of 4.4± feet to a point, said point being 16.5± feet distant easterly from Station 4+58.2± of said baseline; thence easterly, continuing along said property division line, a distance of 1.7± feet to a point, said point being 17.7± feet distant easterly from Station 4+59.4± of said baseline; thence through said lands of Jeanine Coutant Sisco and Keith Sisco the following five (5) courses and distances:

1. South 30°09'02" West, a distance of 24.75 feet to a point, said point being 18.7± feet distant easterly from Station 4+34.7± of said baseline,
2. North 71°28'12" West, a distance of 16.05 feet to a point, said point being 3.1± feet distant easterly from Station 4+30.9± of said baseline,
3. North 26°28'29" East, a distance of 5.06 feet to a point, said point being 2.6± feet distant easterly from Station 4+35.9± of said baseline,
4. South 71°18'57" East, a distance of 10.69 feet to a point, said point being 13.0± feet distant easterly from Station 4+38.4± of said baseline, and
5. North 30°14'55" East, a distance of 18.30 feet to the point or place of beginning and being 185± square feet or 0.01 acres of lands, more or less.



REPLACEMENT OF  
DUTCHESS COUNTY BRIDGES  
PP-2 & PP-11 HOFFMAN ROAD  
OVER SHEKOMOKO CREEK

'EXHIBIT A'  
COUNTY OF DUTCHESS  
DEPARTMENT OF PUBLIC WORKS  
ACQUISITION MAP

MAP NO. 3  
PARCEL NO. 1, 2, & 3  
SHEET 4 OF 4 SHEETS

ORIGINALS OF THIS MAP (SHEETS 1, 2, 3, & 4)  
ARE ON FILE AT THE OFFICES OF THE  
DUTCHESS COUNTY DEPARTMENT OF  
PUBLIC WORKS.

Reserving, however, to the owner of any right, title, or interest in and to the property above delineated, and such owner's successors or assigns. The right of access and the right of using said property and such use shall not be further limited or restricted under the easement beyond that which is necessary to effectuate its purposes for, and established by, the construction or reconstruction and as so constructed or reconstructed, the maintenance, of the herein identified project.

The abovementioned survey baseline, is a portion of the 2014 Survey Baseline for the re-construction of Hoffman Road (aka North Main Street) over the Shekomoko Creek, as shown on the map and described as follows:

Beginning at Station 3+53.57, thence North 32°15'47" East to Station 5+37.91; thence North 6°18'35" East to Station 6+59.38; thence North 27°14'34" East to Station 7+69.56.

All bearings referred to True North at the 74°30' Meridian of West Longitude.

I HEREBY CERTIFY THAT THE PROPERTY MAPPED  
ABOVE IS NECESSARY FOR THIS PROJECT, AND  
THE ACQUISITION THEREOF IS RECOMMENDED.

Date 8-16 2015

[Signature]  
NOEL H. S. KWILLE, AIA, ASLA  
COMMISSIONER OF PUBLIC WORKS

RECOMMENDED BY:

Date August 16 2015

[Signature]  
ROBERT H. BALKIND, P.E.  
DEPUTY COMMISSIONER OF PUBLIC WORKS

I HEREBY CERTIFY THAT THIS IS AN ACCURATE DESCRIPTION  
AND MAP MADE FROM A LIMITED SURVEY, PREPARED  
UNDER MY DIRECTION

Date JULY 31 2015

[Signature]  
JOHN E. QUINN, JR., LAND SURVEYOR  
P.L.S. LICENSE NO. 50269  
CLOUGH-HARBOR & ASSOCIATES LLP



"Unauthorized alteration or addition  
to a survey map bearing a licensed  
land surveyor's seal is a violation of  
Section 7209 Subdivision 2, of the  
New York State Education Law."

**CHIA**

CLOUGH HARBOR & ASSOCIATES LLP

111 Winners Circle, PO Box 5269 - Albany, NY 12205-0269  
t434: (518) 453-4500 • www.cloughharbour.com

FILE NAME \*

PREPARED BY

CHECKED BY

FINAL CHECK BY

## ***Public Works and Capital Projects Roll Call***

<i><b>District</b></i>	<i><b>Name</b></i>	<i><b>Yes</b></i>	<i><b>No</b></i>
District 3 - Town of LaGrange	Borchert*	✓	
District 17 - Town and Village of Fishkill	Miccio*		
District 13 - Towns of LaGrange, East Fishkill, and Wappinger	Bolner*		
District 20 - Town of Red Hook	Strawinski*		
District 14 - Town of Wappinger	Amparo*	absent	
District 4 - Town of Hyde Park	Black	absent	
District 5 - Town of Poughkeepsie	Roman		
District 7 - Towns of Hyde Park and Poughkeepsie	Truitt		
District 8 - City and Town of Poughkeepsie	Brendli		
District 15 - Town of Wappinger	Incoronato (VC)		
District 18 - City of Beacon and Town of Fishkill	Landisi		
District 19 - Towns of North East, Stanford, Pine Plains, Milan	Pulver (C)		

Present: 10

Absent: 2

Vacant: 0

Resolution: ✓

Motion:     

Total : 10 0

Yes  
Abstentions: 0 No

**2016030** AUTHORIZATION TO ACQUIRE A FEE ACQUISITION FROM KEITH SISCO & JEANINE COUTANT SISCO, IN CONNECTION WITH THE PROJECT KNOWN AS REPLACEMENT OF BRIDGES PP-2 AND PP-11, HOFFMAN ROAD OVER THE SHEKOMEKO CREEK, IN THE TOWN OF PINE PLAINS

Date: February 4, 2016

# Roll Call Sheets

District	Last Name	Yes	No
District 3 - Town of LaGrange	Borchert		
District 17 - Town and Village of Fishkill	Miccio		
District 13 - Towns of LaGrange, East Fishkill, and Wappinger	Bolner		
District 20 - Town of Red Hook	Strawinski		
District 14 - Town of Wappinger	Amparo		
District 1 - Town of Poughkeepsie	Nesbitt		
District 2 - Towns of Pleasant Valley and Poughkeepsie	Sagliano		
District 4 - Town of Hyde Park	Black		
District 5 - Town of Poughkeepsie	Roman		
District 6 - Town of Poughkeepsie	Flesland		
District 7 - Towns of Hyde Park and Poughkeepsie	Truitt		
District 8 - City and Town of Poughkeepsie	Brendli		
District 9 - City of Poughkeepsie	Rieser		
District 10 - City of Poughkeepsie	Jeter-Jackson		
District 11 - Towns of Rhinebeck and Clinton	Tyner		
District 12 - Town of East Fishkill	Metzger		
District 15 - Town of Wappinger	Incoronato		
District 16 - Town of Fishkill and City of Beacon	Forman		
District 18 - City of Beacon and Town of Fishkill	Landisi		
District 19 - Towns of North East, Stanford, Pine Plains, Milan	Pulver		
District 21 - Town of East Fishkill	Horton		
District 22 - Towns of Beekman and Union Vale	Coviello		
District 23 - Towns of Pawling, Beekman and East Fishkill	Thomes		
District 24 - Towns of Dover and Union Vale	Surman		
District 25 - Towns of Amenia, Washington, Pleasant Valley	Washburn		

Present:	<u>25</u>	Resolution:	<u>✓</u>	Total :	<u>25</u>	<u>0</u>
Absent:	<u>0</u>	Motion:	<u>—</u>		Yes	No
Vacant:	<u>0</u>			Abstentions:	<u>0</u>	

**2016030 AUTHORIZATION TO ACQUIRE A FEE ACQUISITION FROM KEITH SISCO & JEANINE COUTANT SISCO, IN CONNECTION WITH THE PROJECT KNOWN AS REPLACEMENT OF BRIDGES PP-2 AND PP-11, HOFFMAN ROAD OVER THE SHEKOMEKO CREEK, IN THE TOWN OF PINE PLAINS**

Date: February 8, 2016



FOR DISCUSSION ONLY 2/4/16  
PUBLIC WORKS & CAPITAL PROJECTS

RESOLUTION NO. 2016031

BOND RESOLUTION DATED MARCH 21, 2016.

A RESOLUTION AUTHORIZING THE COST OF THE DUTCHESS COUNTY JUSTICE AND TRANSITION CENTER PROJECT, IN AND FOR THE COUNTY OF DUTCHESS, NEW YORK, AT A MAXIMUM ESTIMATED COST OF \$192,150,000, AND AUTHORIZING THE ISSUANCE OF \$192,150,000 BONDS TO PAY THE COST THEREOF

WHEREAS, the capital project hereinafter described, as proposed, has been determined to be a Type I Action pursuant to the regulations of the New York State Department of Environmental Conservation promulgated pursuant to the State Environmental Quality Review Act, as to which an Expanded Full Environmental Assessment Form has been completed and as to which it has been determined such capital project will not have any significant adverse impacts on the environment; and

WHEREAS, to the extent permitted by all applicable laws, the County will use its best efforts to promote a preference for local businesses and the local resident workforce; and

WHEREAS, the County shall continue to work with consultants as needed, to assist with programming and design of the Justice and Transition Center to meet the needs of special populations including: women, youth and individuals with behavioral health issues; and

WHEREAS, the County shall continue to develop provisions and programs for seamless re-entry into the community to establish a continuum of treatment in order to drive down recidivism; and

WHEREAS, the County has included in the 2016 capital plan \$1 million for a youth center (project and location to be determined) and the County Executive has advised his intent to increase the County's capital commitment for a youth center to \$1.5 million; and

WHEREAS, it has been proven that evidence based youth programming can have a positive impact by reducing the number of youth on track to enter the criminal justice system when they become adults; and

WHEREAS, the County has and will continue to conduct a comprehensive assessment of current interventions and programming that exist within the County as well as make recommendations for enhancements or new programs, with gap analysis to help identify necessary areas of programmatic effort and the number/types of beds required to meet future demands and expected reductions, and to help identify additional current and future needs; and

WHEREAS, the County shall perform a study related to the integration of existing crime prevention efforts and youth services, and develop a youth services plan for the City of Poughkeepsie to determine the needs, scope and uses for a Youth Center; and

WHEREAS, it is now desired to authorize the financing of the capital project hereinafter described, NOW, THEREFORE,

BE IT RESOLVED, by the County Legislature of the County of Dutchess, New York, as follows:

Section 1. The construction of the Dutchess County Justice and Transition Center (the "Project") on the present County Jail site at North Hamilton Street and Parker Avenue, in the City of Poughkeepsie, New York (including the previously acquired Taylor property, the "Campus"), reconstruction of a portion of the existing County Jail, and the construction of a new Law Enforcement Center at said Campus, and other related structures on the Campus, including

demolition of existing structures and/or portions thereof on the premises, together with professional design fees, interest during construction, site improvements, furnishings, equipment, and incidental improvements and expenses in connection therewith, in and for the County of Dutchess, New York, is hereby authorized at a maximum estimated cost of \$192,150,000.

Section 2. It is hereby determined that the plan for the financing of said class of objects or purposes is by the issuance of \$192,150,000 bonds of the County of Dutchess, New York, hereby authorized to be issued therefor pursuant to the provisions of the Local Finance Law.

Section 3. It is hereby determined that the period of probable usefulness of the aforesaid class of objects or purposes is 30 years, pursuant to subdivision 94, based upon subdivisions 11(a)(1) and 12(a)(1), all of paragraph a of Section 11.00 of the Local Finance Law.

Section 4. The faith and credit of said County of Dutchess, New York, are hereby irrevocably pledged for the payment of the principal of and interest on such bonds as the same respectively become due and payable. An annual appropriation shall be made in each year sufficient to pay the principal of and interest on such bonds becoming due and payable in such year. There shall annually be levied on all the taxable real property of said County a tax sufficient to pay the principal of and interest on such bonds as the same become due and payable.

Section 5. Subject to the provisions of the Local Finance Law, the power to authorize the issuance of and to sell bond anticipation notes in anticipation of the issuance and sale of the serial bonds herein authorized, including renewals of such notes, is hereby delegated to the Commissioner of Finance, the chief fiscal officer. Such notes shall be of such terms, form and contents, and shall be sold in such manner, as may be prescribed by said Commissioner of Finance, consistent with the provisions of the Local Finance Law.

Section 6. Such bonds shall be in fully registered form and shall be signed in the name of the County of Dutchess, New York, by the manual or facsimile signature of the Commissioner of Finance and a facsimile of its corporate seal shall be imprinted or impressed thereon and may be attested by the manual or facsimile signature of the County Clerk.

Section 7. The powers and duties of advertising such bonds for sale, conducting the sale and awarding the bonds, are hereby delegated to the Commissioner of Finance, who shall advertise such bonds for sale, conduct the sale, and award the bonds in such manner as she shall deem best for the interests of the County; provided, however, that in the exercise of these delegated powers, she shall comply fully with the provisions of the Local Finance Law and any order or rule of the State Comptroller applicable to the sale of municipal bonds. The receipt of the Commissioner of Finance shall be a full acquittance to the purchaser of such bonds, who shall not be obliged to see to the application of the purchase money.

Section 8. All other matters, except as provided herein relating to such bonds including determining whether to issue such bonds having substantially level or declining annual debt service and all matters related thereto, prescribing whether manual or facsimile signatures shall appear on said bonds, prescribing the method for the recording of ownership of said bonds, appointing the fiscal agent or agents for said bonds, providing for the printing and delivery of said bonds (and if said bonds are to be executed in the name of the County by the facsimile signature of the Commissioner of Finance, providing for the manual countersignature of a fiscal agent or of a designated official of the County), the date, denominations, maturities and interest payment dates, place or places of payment, and also including the consolidation with other issues, shall be determined by the Commissioner of Finance. It is hereby determined that it is to the financial advantage of the County not to impose and collect from registered owners of such serial bonds any

charges for mailing, shipping and insuring bonds transferred or exchanged by the fiscal agent, and, accordingly, pursuant to paragraph c of Section 70.00 of the Local Finance Law, no such charges shall be so collected by the fiscal agent. Such bonds shall contain substantially the recital of validity clause provided for in section 52.00 of the Local Finance Law and shall otherwise be in such form and contain such recitals in addition to those required by section 52.00 of the Local Finance Law, as the Commissioner of Finance shall determine.

Section 9. This resolution shall constitute a statement of official intent for purposes of Treasury Regulations Section 1.150 - 2. Other than as specified in this resolution, no monies are, or are reasonably expected to be, reserved, allocated on a long-term basis, or otherwise set aside with respect to the permanent funding of the object or purpose described herein.

Section 10. The validity of such bonds and bond anticipation notes may be contested only if:

- 1) Such obligations are authorized for an object or purpose for which said County is not authorized to expend money, or
- 2) The provisions of law which should be complied with at the date of publication of this resolution are not substantially complied with, and an action, suit or proceeding contesting such validity is commenced within twenty days after the date of such publication, or
- 3) Such obligations are authorized in violation of the provisions of the Constitution.

Section 11. This resolution, which takes effect immediately, shall be published in full in *The Poughkeepsie Journal* and the *Southern Dutchess News*, the official newspapers of said County, together with a notice of the Clerk of the County Legislature in substantially the form provided in Section 81.00 of the Local Finance Law.

## CERTIFICATION FORM

STATE OF NEW YORK     )  
                                      ) ss.:  
COUNTY OF DUTCHESS    )

I, the undersigned Clerk of the County Legislature of the County of Dutchess, New York (the "Issuer"), DO HEREBY CERTIFY:

That I have compared the annexed extract of the minutes of the meeting of the County Legislature of said County, including the resolution contained therein, held on March 21, 2016, with the original thereof on file in my office, and that the same is a true and correct transcript therefrom and of the whole of said original so far as the same relates to the subject matters therein referred to.

I FURTHER CERTIFY that said County Legislature consists of 25 members; that the vote on the foregoing resolution was \_\_\_\_\_ ayes and \_\_\_\_\_ noes, with \_\_\_\_\_ members being absent or abstaining from voting.

I FURTHER CERTIFY that the foregoing resolution as adopted by said County Legislature was duly approved by the County Executive of said County on \_\_\_\_\_, 2016, in accordance with the provisions of Section 3.02 of the Dutchess County Charter.

I FURTHER certify that all members of said Legislature had due notice of said meeting, and that, pursuant to Section 103 of the Public Officers Law (Open Meetings Law), said meeting was open to the general public, and that I duly caused a public notice of the time and place of said meeting to be given to the following newspapers and/or other news media as follows:

Newspaper and/or other news media

Date given

and that I further duly caused public notice of the time and place of said meeting to be conspicuously posted in the following designated public location(s) on the following dates:

Designated Location(s)  
of posted notice

Date of Posting

IN WITNESS WHEREOF, I have hereunto set my hand and affixed the seal of the County Legislature this \_\_\_\_\_ day of March, 2016.

(CORPORATE SEAL)

\_\_\_\_\_  
Clerk, County Legislature



## LEGAL NOTICE OF ESTOPPEL

The following entitled bond resolution, a summary of which is published herewith, has been adopted on March 21, 2016, and the validity of the obligations authorized by such resolution may be hereafter contested only if such obligations were authorized for an object or purpose for which the County of Dutchess, New York, is not authorized to expend money, or if the provisions of law which should have been complied with as of the date of publication of this notice were not substantially complied with, and an action, suit or proceeding contesting such validity is commenced within twenty days after the date of publication of this notice, or such obligations were authorized in violation of the provisions of the Constitution.

A complete copy of the resolution summarized herewith is each available for public inspection during regular business hours at the Office of the Clerk of the Legislature for a period of twenty days from the date of publication of this Notice.

Dated: Poughkeepsie, New York,

\_\_\_\_\_, 2016

\_\_\_\_\_  
Clerk, County Legislature

RESOLUTION NO. \_\_\_\_\_, 2016

BOND RESOLUTION DATED MARCH 21, 2016.

A RESOLUTION AUTHORIZING THE COST OF THE DUTCHESS COUNTY JUSTICE AND TRANSITION CENTER PROJECT, IN AND FOR THE COUNTY OF DUTCHESS, NEW YORK, AT A MAXIMUM ESTIMATED COST OF \$192,150,000, AND AUTHORIZING THE ISSUANCE OF \$192,150,000 BONDS TO PAY THE COST THEREOF.

<b>Class of objects or purposes:</b>	Construction of Dutchess County Justice and Transition Center Project
<b>Period of probable usefulness:</b>	30 years
<b>Maximum estimated cost:</b>	\$192,150,000
<b>Amount of bonds to be issued:</b>	\$192,150,000 bonds
<b>SEQRA status:</b>	Type I Action. Negative Declaration. SEQRA compliance materials, including Expanded Full Environmental Assessment Form and related documentation on file in the office of the Clerk of the County Legislature which it may be inspected during regular office hours

The foregoing Resolution No. 2016031, was offered for discussion only at the February 4, 2016, Public Works and Capital Projects Committee, and considered at the \_\_\_, 2016, Board Meeting.

Roll call vote on the foregoing resolution resulted as follows:

AYES:

NAYS:

RESOLUTION NO. 2016032

RE: SETTING A PUBLIC HEARING IN CONNECTION WITH  
THE ESTABLISHMENT OF A PART COUNTY SEWER  
DISTRICT #10 LOCATED IN THE TOWNS OF  
HYDE PARK AND RHINEBECK

Legislators FORMAN, BORCHERT, BOLNER, SAGLIANO, WASHBURN, HORTON, JETER-JACKSON, NESBITT, BLACK, and TRUITT offer the following and move its adoption:

WHEREAS, the New York State Legislature, by Chapter 592 of the Laws of 1991 (Section 1142, Public Authorities Law), created the Dutchess County Water & Wastewater Authority (WWA), and

WHEREAS, the WWA is entering into an Agreement, with the owners of the Vanderburgh Cove Sewer System regarding the WWA's acquisition of that system which is located in the Towns of Hyde Park and Rhinebeck; and

WHEREAS, the WWA's ability to close on this acquisition and provide sewer service to the customers of Vanderburgh Cove is contingent on the creation of a Part County Sewer District encompassing all properties in the said sewer system which will include a total of forty (42) tax parcels, consisting of 27 residential customers in the Town of Rhinebeck and 13 residential customers in the Town of Hyde Park, and two wastewater treatment parcels, and

WHEREAS, the WWA has presented to this Legislature a notice of project pursuant to Section 1124 of the Public Authorities Law which outlines the WWA's plan to establish A Part County Sewer District #10 for the Vanderburgh Cove Sewer System, located in the Towns of Hyde Park and Rhinebeck, and

WHEREAS, said notice of project also describes the District that will be created which is more particularly described in Attachment A attached hereto, and

WHEREAS, it is necessary to conduct a public hearing on the establishment of such a District, now therefore, be it

RESOLVED, that this Legislature shall conduct a public hearing on the 14th day of March 2016, at 7pm, in the afternoon of said day, at the Chambers of the Dutchess County Legislature, County Office Building, 22 Market Street, Poughkeepsie, New York, on a proposal to establish District #10 for the Vanderburgh Cove Sewer System located in the Towns of Hyde Park and Rhinebeck, Dutchess County, New York, described in Attachment A attached hereto, and be it further

RESOLVED, that the Clerk of the Legislature shall publish notice of said hearing in the official newspapers of the County and shall include therein a description, identifying the areas to be included within the District, the improvements proposed, the maximum amount to be expended for the improvements, the proposed method of assessment of the cost, the estimated cost of hook-up fees, if any, the cost to the typical property or one or two family home, all in accordance with Section 254 of the County Law.

CA-010-16

CRC/kvh/G-1217-O

1/05/16 Fiscal Impact:

Statement will be attached to resolution creating District when submitted to Legislature

APPROVED

MARCUS J. MOLINARO  
COUNTY EXECUTIVE

Date 2/9/2016

STATE OF NEW YORK

COUNTY OF DUTCHESS

ss:

This is to certify that I, the undersigned Clerk of the Legislature of the County of Dutchess have compared the foregoing resolution with the original resolution now on file in the office of said clerk, and which was adopted by said Legislature on the 8th day of February 2016, and that the same is a true and correct transcript of said original resolution and of the whole thereof.

IN WITNESS WHEREOF, I have hereunto set my hand and seal of said Legislature this 8th day of February 2016.

CAROLYN MORRIS, CLERK OF THE LEGISLATURE

## FISCAL IMPACT STATEMENT

☒ NO FISCAL IMPACT PROJECTED

### APPROPRIATION RESOLUTIONS

(To be completed by requesting department)

Total Current Year Cost \$ \_\_\_\_\_

Total Current Year Revenue \$ \_\_\_\_\_  
and Source

Source of County Funds (check one): ☐ Existing Appropriations, ☐ Contingency,  
☐ Transfer of Existing Appropriations, ☐ Additional Appropriations, ☐ Other (explain).

Identify Line Items(s):

Related Expenses: Amount \$ \_\_\_\_\_

Nature/Reason:

Anticipated Savings to County: \_\_\_\_\_

Net County Cost (this year): \_\_\_\_\_  
Over Five Years: \_\_\_\_\_

Additional Comments/Explanation:

Prepared by: Bridget Barclay

Prepared On: Jan. 4, 2016

## ATTACHMENT "A"

### Dutchess County Sewer District #10 Vanderburgh Cove Sewer System

#### DESCRIPTION OF ZONE

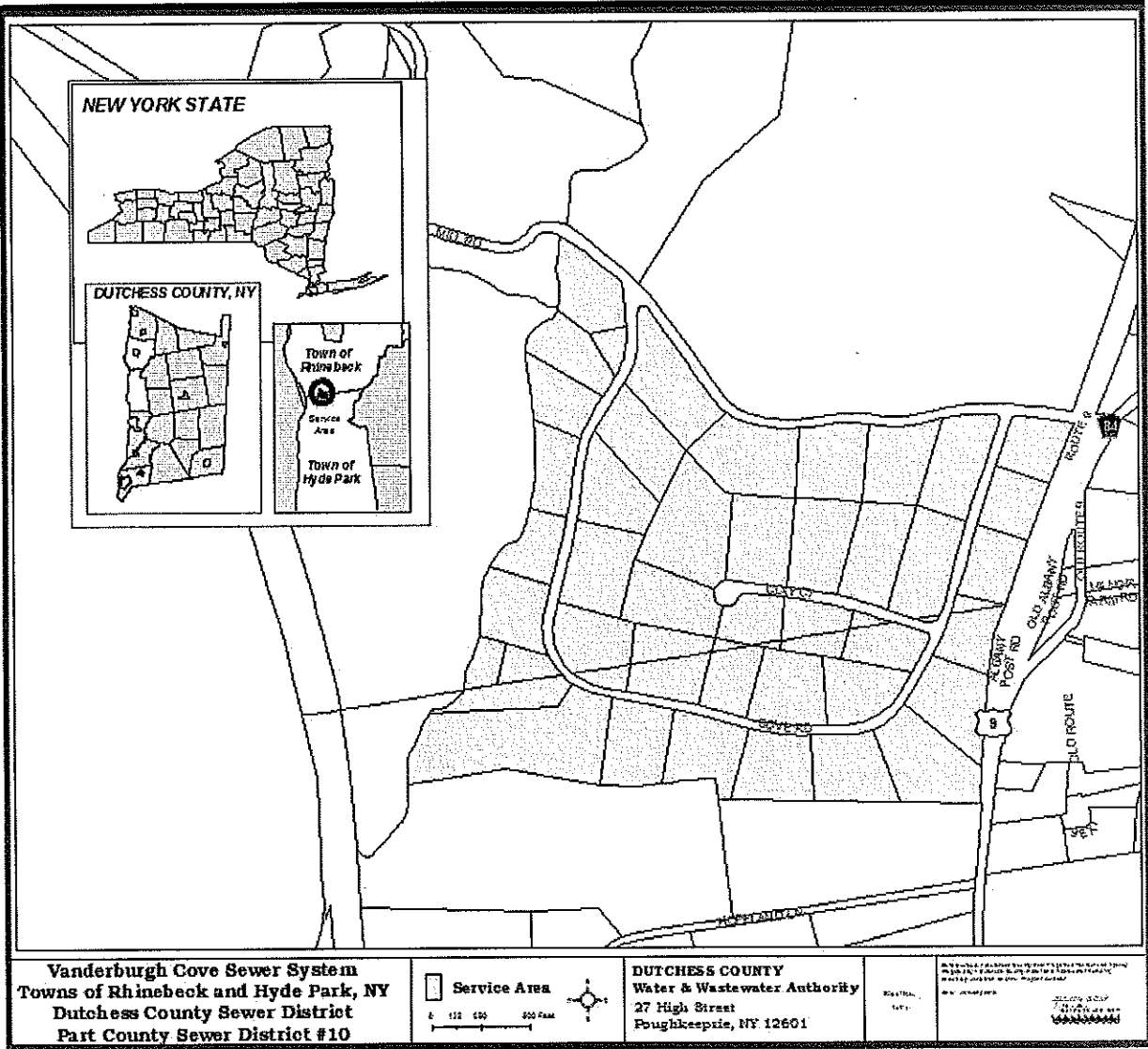
(map and parcel listing)

The Dutchess County Sewer District #10 shall include all those tax parcels presently indicated on the attached boundary map. These parcels are further described by the following list of tax parcel grid numbers:

#### Tax Parcels

133200-6168-03-341265-0000	135089-6168-00-142379-0000
133200-6168-03-292271-0000	135089-6168-00-134342-0000
133200-6168-03-214242-0000	135089-6168-00-200419-0000
133200-6168-03-325236-0000	135089-6168-00-210349-0000
133200-6168-03-251233-0000	135089-6168-00-200314-0000
133200-6168-03-286232-0000	135089-6168-00-275342-0000
133200-6168-03-180247-0000	135089-6168-00-384390-0000
133200-6168-03-273294-0000	135089-6168-00-170441-0000
133200-6168-03-248291-0000	135089-6168-00-240386-0000
133200-6168-03-123249-0000	135089-6168-00-281383-0000
133200-6168-03-308294-0000	135089-6168-00-163330-0000
133200-6168-03-348297-0000	135089-6168-00-245345-0000
133200-6168-03-258272-0000	135089-6168-00-345382-0000
133200-6168-03-166277-0000	135089-6168-00-295305-0000
133200-6168-03-228278-0000	135089-6168-00-198292-0000
133200-6168-03-120269-0000	135089-6168-00-104282-0000
133200-6168-03-197278-0000	135089-6168-00-225293-0000
135089-6168-00-304337-0000	135089-6168-00-348312-0000
135089-6168-00-145414-0000	135089-6168-00-118311-0000
135089-6168-00-149440-0000	135089-6168-00-272304-0000
135089-6168-00-171367-0000	135089-6168-00-330331-0000
135089-6168-00-158469-0000	135089-6168-00-363332-0000
135089-6168-00-374363-0000	135089-6168-00-242305-0000
135089-6168-00-315382-0000	135089-6168-00-124283-0000
135089-6168-00-185394-0000	135089-6168-00-160295-0000

## Map



## **DUTCHESS COUNTY**

# **WATER AND WASTEWATER AUTHORITY**



27 High St. 2<sup>nd</sup> Floor  
Poughkeepsie  
New York, 12601  
(845) 486-3601  
Fax (845) 486-3610  
dcwwa@dutchessny.gov  
www.DCWWA.org

### Authority Board Members

**Thomas LeGrand**  
Chairperson

**Vincent DiMaso**  
Vice-Chairperson

**Rudy Vavra**  
Treasurer

**Lawrence R. Knapp**  
Secretary

### Ex officio Members

**Brian Scoralick**  
Acting Executive Director  
Soil and Water Conservation District

**Eoin Wrafter**  
Commissioner  
Dept. of Planning & Development

### Staff

**Bridget Barclay**  
Executive Director

**Mary C. Morris**  
Deputy Director

January 26, 2016

Dutchess County Legislature  
35 Market Street  
Poughkeepsie, NY 12601

Attention: Hon. Carolyn Morris, Clerk

RE: Acquisition of Vanderburgh Cove Sewer System in the  
Towns of Rhinebeck and Hyde Park

Dear Clerk Morris:

Pursuant to Article 5, Title 6-C, Section 1124, Subparagraph 6 of the Public Authorities Law, the Dutchess County Water and Wastewater Authority (the "Authority") is hereby notifying the Dutchess County legislature that the Authority proposes to undertake a project. The project is the acquisition of the Vanderburgh Cove Sewer System, owned by the Towns of Rhinebeck and Hyde Park, and the provision of sewer services to all properties within the system's current service area, all as described more fully below.

In support of this project, the Authority is requesting that the County Legislature establish a new Part County Sewer District, District #10, and approve a Service Agreement between the County, on behalf of Part County Sewer District #10, and the Authority. The proposed Sewer District will include a total of 42 parcels; 40 developed single family residences and 2 parcels on which the sewer treatment facilities are located. Of the developed lots served, 27 are located in the Town of Rhinebeck, and the remaining 13 in the Town of Hyde Park.

The Authority will provide to the County a Map, Plan and Report that will identify the parcels to be included in the proposed new Part County Sewer District, describe the infrastructure and facilities being acquired in order to provide sewer services, describe the improvements to be constructed subsequent to the Authority's acquisition, and provide the estimated annual cost for the typical property in the proposed Sewer District.

Pursuant to the State Environmental Quality Review Act, the Authority, as Lead Agency for the review of this Unlisted Action, has completed its review and determined the



action will have no negative environmental impacts. The Authority Board resolution and SEQR documents are enclosed.

The Authority respectfully requests that the Dutchess County Legislature take such action as it may determine in its own discretion to be appropriate in connection with the review of this project, and that the action taken be such that the Dutchess County Legislature does not act to deny the Authority the right to proceed with the project.

Sincerely,

A handwritten signature in black ink, appearing to read "Bridget Barclay", with a long, sweeping horizontal line extending to the right.

Bridget Barclay,  
Executive Director

Enc.

cc: Hon. Marcus J. Molinaro  
Authority Board of Directors  
County Attorney James Fedorchak

**RESOLUTION NO. 2015.12.X**

**Authority Board – DCWWA  
December 16, 2015 meeting**

**Vanderburgh Cove Sewer System Acquisition – SEQR Determination**

Rudy Vavra offers the following resolution and moves its adoption:

WHEREAS; the Authority proposes to enter into an Agreement with the Towns of Rhinebeck and Hyde Park regarding the acquisition by the Authority of the Vanderburgh Cove Sewer System, and

WHEREAS; upon acquisition of the Vanderburgh Cove Sewer System, the Authority will serve the wastewater treatment needs of the customers of the Vanderburgh Cove Sewer System in accordance with the terms of the Agreement, and

WHEREAS; the County of Dutchess must create a Part County Sewer District encompassing the proposed sewer service area and execute a corresponding Service Agreement with the Authority in order for the Authority to provide sewer services within this framework, and

WHEREAS; it would be in the public interest for the Authority to acquire the Vanderburgh Cove Sewer System and for the County to establish the Part County Sewer District and execute the Service Agreement, and

WHEREAS; in accordance with the requirements of the SEQR Act, the Authority must make a determination as to the Environmental Impact of this proposed action, and

WHEREAS; for the purposes of the SEQR review, the action includes the transfer of ownership, establishment of the Part County Sewer District and execution of the Service Agreement, and involves no physical change to the sewer system nor any change to the service area, and

WHEREAS; this action has been classified as “Unlisted” and a Short Environmental Assessment Form has been completed and submitted to the Board, and

WHEREAS; the service area of the Vanderburgh Cove Sewer System is described in the map and tax parcel list made a part of the Short Environmental Assessment Form, and

THEREFORE BE IT RESOLVED THAT; the Authority Board declares itself as Lead Agency for this action, and

BE IT FURTHER RESOLVED THAT; the Authority Board does hereby determine that this action will not have a significant impact on the environment and hereby adopts the attached Negative Declaration with respect to this matter.

Seconded by Vincent DiMaso

<u>Record of Vote:</u>	<u>Aye</u>	<u>Nay</u>
Thomas LeGrand	X	___
Vincent DiMaso	X	___
Larry Knapp	Absent	
Rudy Vavra	X	___

# Short Environmental Assessment Form

## Part 1 - Project Information

### Instructions for Completing

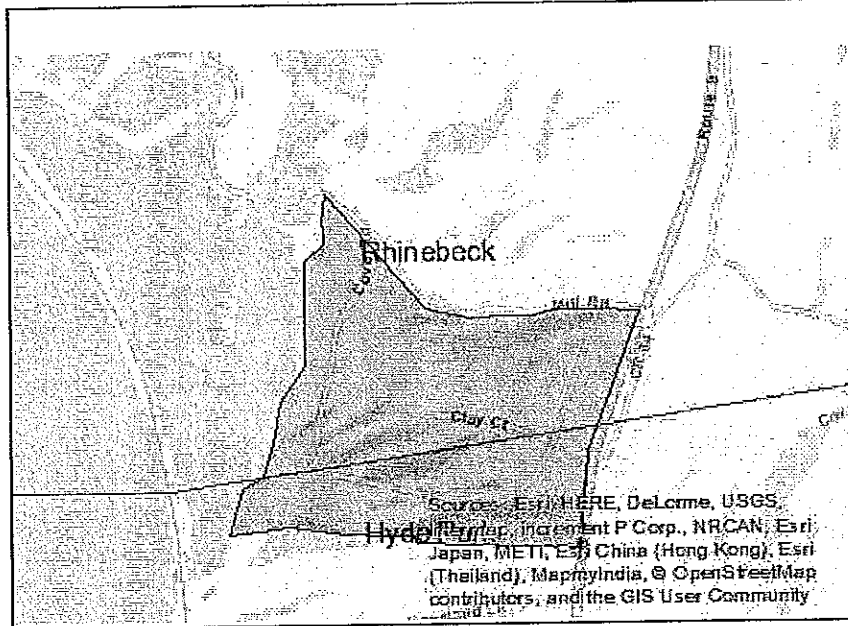
**Part 1 - Project Information.** The applicant or project sponsor is responsible for the completion of Part 1. Responses become part of the application for approval or funding, are subject to public review, and may be subject to further verification. Complete Part 1 based on information currently available. If additional research or investigation would be needed to fully respond to any item, please answer as thoroughly as possible based on current information.

Complete all items in Part 1. You may also provide any additional information which you believe will be needed by or useful to the lead agency; attach additional pages as necessary to supplement any item.

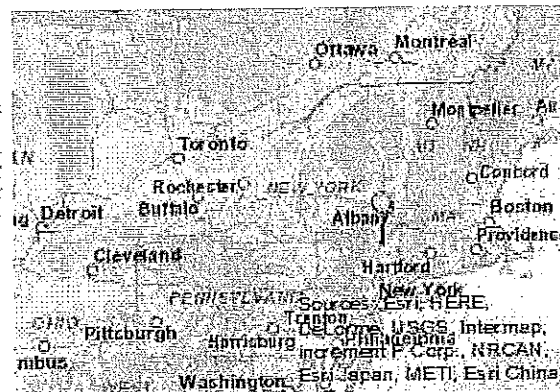
<b>Part 1 - Project and Sponsor Information</b>			
Name of Action or Project: Acquisition of Vanderburgh Cove Sewer System			
Project Location (describe, and attach a location map): Mill Road, Cove Road and Clay Court in the Towns of Rhinebeck and Hyde Park. (Map and tax parcel list attached.)			
Brief Description of Proposed Action: Acquisition of property, easements, treatment systems, collection system and all other assets of the Vanderburgh Cove Sewer System. Creation of Part County Sewer District #10 by Dutchess County. Execution of a Service Agreement for PCDS #10 between DCWWA and Dutchess County. Provision of sewer services by the DCWWA to properties encompassed by Part County Sewer District #10.			
Name of Applicant or Sponsor: Dutchess County Water and Wastewater Authority		Telephone: (845) 486-3601 E-Mail: dcwwa@dutchessny.org	
Address: 27 High Street			
City/PO: Poughkeepsie	State: NY	Zip Code: 12601	
1. Does the proposed action only involve the legislative adoption of a plan, local law, ordinance, administrative rule, or regulation? If Yes, attach a narrative description of the intent of the proposed action and the environmental resources that may be affected in the municipality and proceed to Part 2. If no, continue to question 2.		NO <input checked="" type="checkbox"/>	YES <input type="checkbox"/>
2. Does the proposed action require a permit, approval or funding from any other governmental Agency? If Yes, list agency(s) name and permit or approval: Dutchess County; Creation of Part County Sewer District #10; Approval of Service Agreement		NO <input type="checkbox"/>	YES <input checked="" type="checkbox"/>
3.a. Total acreage of the site of the proposed action?		124 acres	
b. Total acreage to be physically disturbed?		0 acres	
c. Total acreage (project site and any contiguous properties) owned or controlled by the applicant or project sponsor?		124 acres	
4. Check all land uses that occur on, adjoining and near the proposed action. <input type="checkbox"/> Urban <input checked="" type="checkbox"/> Rural (non-agriculture) <input type="checkbox"/> Industrial <input type="checkbox"/> Commercial <input checked="" type="checkbox"/> Residential (suburban) <input type="checkbox"/> Forest <input type="checkbox"/> Agriculture <input checked="" type="checkbox"/> Aquatic <input type="checkbox"/> Other (specify): _____ <input type="checkbox"/> Parkland			

Is the proposed action,	NO	YES	N/A
a. A permitted use under the zoning regulations?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Consistent with the adopted comprehensive plan?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c. Is the proposed action consistent with the predominant character of the existing built or natural landscape?	NO	YES	
	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
d. Is the site of the proposed action located in, or does it adjoin, a state listed Critical Environmental Area?	NO	YES	
e. Yes, identify: Name:Vanderburgh Cove, Reason:Sensitivity to change & habitat and species protection, Agency:Hyde Park, Town of, Date:6-7-2009	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
f. a. Will the proposed action result in a substantial increase in traffic above present levels?	NO	YES	
	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
b. Are public transportation service(s) available at or near the site of the proposed action?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
c. Are any pedestrian accommodations or bicycle routes available on or near site of the proposed action?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
g. Does the proposed action meet or exceed the state energy code requirements?	NO	YES	
h. If the proposed action will exceed requirements, describe design features and technologies:	<input type="checkbox"/>	<input type="checkbox"/>	
A			
0. Will the proposed action connect to an existing public/private water supply?	NO	YES	
If No, describe method for providing potable water:	<input type="checkbox"/>	<input type="checkbox"/>	
1. Will the proposed action connect to existing wastewater utilities?	NO	YES	
If No, describe method for providing wastewater treatment:	<input type="checkbox"/>	<input type="checkbox"/>	
A			
2. a. Does the site contain a structure that is listed on either the State or National Register of Historic Places?	NO	YES	
	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
b. Is the proposed action located in an archeological sensitive area?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
3. a. Does any portion of the site of the proposed action, or lands adjoining the proposed action, contain wetlands or other waterbodies regulated by a federal, state or local agency?	NO	YES	
	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
b. Would the proposed action physically alter, or encroach into, any existing wetland or waterbody?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
c. Yes, identify the wetland or waterbody and extent of alterations in square feet or acres:			
4. Identify the typical habitat types that occur on, or are likely to be found on the project site. Check all that apply:			
<input checked="" type="checkbox"/> Shoreline <input type="checkbox"/> Forest <input type="checkbox"/> Agricultural/grasslands <input checked="" type="checkbox"/> Early mid-successional			
<input checked="" type="checkbox"/> Wetland <input type="checkbox"/> Urban <input checked="" type="checkbox"/> Suburban			
5. Does the site of the proposed action contain any species of animal, or associated habitats, listed by the State or Federal government as threatened or endangered?	NO	YES	
	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
6. Is the project site located in the 100 year flood plain?	NO	YES	
	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
7. Will the proposed action create storm water discharge, either from point or non-point sources?	NO	YES	
Yes;			
a. Will storm water discharges flow to adjacent properties?	<input checked="" type="checkbox"/> NO <input type="checkbox"/> YES	<input type="checkbox"/>	<input type="checkbox"/>
b. Will storm water discharges be directed to established conveyance systems (runoff and storm drains)?	<input type="checkbox"/> NO <input type="checkbox"/> YES		
Yes, briefly describe:			

18. Does the proposed action include construction or other activities that result in the impoundment of water or other liquids (e.g. retention pond, waste lagoon, dam)? If Yes, explain purpose and size: _____ _____	NO	YES
	<input checked="" type="checkbox"/>	<input type="checkbox"/>
19. Has the site of the proposed action or an adjoining property been the location of an active or closed solid waste management facility? If Yes, describe: _____ _____	NO	YES
	<input checked="" type="checkbox"/>	<input type="checkbox"/>
20. Has the site of the proposed action or an adjoining property been the subject of remediation (ongoing or completed) for hazardous waste? If Yes, describe: _____ _____	NO	YES
	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<b>I AFFIRM THAT THE INFORMATION PROVIDED ABOVE IS TRUE AND ACCURATE TO THE BEST OF MY KNOWLEDGE</b>		
Applicant/sponsor name: <u>Dutchess County Water and Wastewater Authority</u>		Date: <u>December 10, 2015</u>
Signature: <u>Bridget Barclay</u>		



**Disclaimer:** The EAF Mapper is a screening tool intended to assist project sponsors and reviewing agencies in preparing an environmental assessment form (EAF). Not all questions asked in the EAF are answered by the EAF Mapper. Additional information on any EAF question can be obtained by consulting the EAF Workbooks. Although the EAF Mapper provides the most up-to-date digital data available to DEC, you may also need to contact local or other data sources in order to obtain data not provided by the Mapper. Digital data is not a substitute for agency determinations.



Part 1 / Question 7 [Critical Environmental Area]	Yes
Part 1 / Question 7 [Critical Environmental Area - Identify]	Name:Vanderburgh Cove, Reason:Sensitivity to change & habitat and species protection, Agency:Hyde Park, Town of, Date:6-7-2009
Part 1 / Question 12a [National Register of Historic Places]	Yes
Part 1 / Question 12b [Archeological Sites]	Yes
Part 1 / Question 13a [Wetlands or Other Regulated Waterbodies]	Yes - Digital mapping information on local and federal wetlands and waterbodies is known to be incomplete. Refer to EAF Workbook.
Part 1 / Question 15 [Threatened or Endangered Animal]	Yes
Part 1 / Question 16 [100 Year Flood Plain]	Yes
Part 1 / Question 20 [Remediation Site]	Yes

Project: Date: 

## *Short Environmental Assessment Form*

### *Part 2 - Impact Assessment*

**Part 2 is to be completed by the Lead Agency.**

Answer all of the following questions in Part 2 using the information contained in Part 1 and other materials submitted by the project sponsor or otherwise available to the reviewer. When answering the questions the reviewer should be guided by the concept "Have my responses been reasonable considering the scale and context of the proposed action?"

	No, or small impact may occur	Moderate to large impact may occur
1. Will the proposed action create a material conflict with an adopted land use plan or zoning regulations?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2. Will the proposed action result in a change in the use or intensity of use of land?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
3. Will the proposed action impair the character or quality of the existing community?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
4. Will the proposed action have an impact on the environmental characteristics that caused the establishment of a Critical Environmental Area (CEA)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
5. Will the proposed action result in an adverse change in the existing level of traffic or affect existing infrastructure for mass transit, biking or walkway?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
6. Will the proposed action cause an increase in the use of energy and it fails to incorporate reasonably available energy conservation or renewable energy opportunities?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
7. Will the proposed action impact existing:	<input checked="" type="checkbox"/>	<input type="checkbox"/>
a. public / private water supplies?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. public / private wastewater treatment utilities?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
8. Will the proposed action impair the character or quality of important historic, archaeological, architectural or aesthetic resources?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
9. Will the proposed action result in an adverse change to natural resources (e.g., wetlands, waterbodies, groundwater, air quality, flora and fauna)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
10. Will the proposed action result in an increase in the potential for erosion, flooding or drainage problems?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
11. Will the proposed action create a hazard to environmental resources or human health?	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Project:

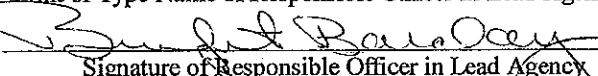
Date:

### Short Environmental Assessment Form Part 3 Determination of Significance

For every question in Part 2 that was answered "moderate to large impact may occur", or if there is a need to explain why a particular element of the proposed action may or will not result in a significant adverse environmental impact, please complete Part 3. Part 3 should, in sufficient detail, identify the impact, including any measures or design elements that have been included by the project sponsor to avoid or reduce impacts. Part 3 should also explain how the lead agency determined that the impact may or will not be significant. Each potential impact should be assessed considering its setting, probability of occurring, duration, irreversibility, geographic scope and magnitude. Also consider the potential for short-term, long-term and cumulative impacts.

The action involves the transfer of ownership of an existing sewer system. This action involves no changes to the site, the infrastructure nor the service area. As there are no physical changes contemplated, there will be no negative environmental impacts.

This action is considered to be an unlisted action.

<input type="checkbox"/>	Check this box if you have determined, based on the information and analysis above, and any supporting documentation, that the proposed action may result in one or more potentially large or significant adverse impacts and an environmental impact statement is required.
<input checked="" type="checkbox"/>	Check this box if you have determined, based on the information and analysis above, and any supporting documentation, that the proposed action will not result in any significant adverse environmental impacts.
Dutchess County Water and Wastewater Authority	December 16, 2015
Name of Lead Agency	Date
Bridget Barclay	Executive Director
Print or Type Name of Responsible Officer in Lead Agency	Title of Responsible Officer
	
Signature of Responsible Officer in Lead Agency	Signature of Preparer (if different from Responsible Officer)

**PRINT FORM**



## Environment Committee Roll Call

<i>District</i>	<i>Name</i>	<i>Yes</i>	<i>No</i>
District 3 - Town of LaGrange	Borchert *	✓	
District 17 - Town and Village of Fishkill	Miccio*		
District 13 - Towns of LaGrange, East Fishkill, and Wappinger	Bolner*		
District 20 - Town of Red Hook	Strawinski*		
District 14 - Town of Wappinger	Amparo*		
District 9 - City of Poughkeepsie	Rieser		
District 11 - Towns of Rhinebeck and Clinton	Tyner		
District 12 - Town of East Fishkill	Metzger		
District 16 - Town of Fishkill and City of Beacon	Forman (C)		
District 22 - Towns of Beekman and Union Vale	Coviello		
District 24 - Towns of Dover and Union Vale	Surman		
District 25 - Towns of Amenia, Washington, Pleasant Valley	Washburn (VC)	<i>absent</i>	

Present: 11  
 Absent: 1  
 Vacant: 0

Resolution: ✓  
 Motion:     

Total : 11 0  
           Yes       No  
 Abstentions: 0

**2016032** SETTING A PUBLIC HEARING IN CONNECTION WITH THE  
 ESTABLISHMENT OF A PART COUNTY SEWER DISTRICT #10 LOCATED IN THE  
 TOWNS OF HYDE PARK AND RHINEBECK

Date: February 4, 2016

# Roll Call Sheets

District	Last Name	Yes	No
District 3 - Town of LaGrange	Borchert		
District 17 - Town and Village of Fishkill	Miccio		
District 13 - Towns of LaGrange, East Fishkill, and Wappinger	Bolner		
District 20 - Town of Red Hook	Strawinski		
District 14 - Town of Wappinger	Amparo		
District 1 - Town of Poughkeepsie	Nesbitt		
District 2 - Towns of Pleasant Valley and Poughkeepsie	Sagliano		
District 4 - Town of Hyde Park	Black		
District 5 - Town of Poughkeepsie	Roman		
District 6 - Town of Poughkeepsie	Flesland		
District 7 - Towns of Hyde Park and Poughkeepsie	Truitt		
District 8 - City and Town of Poughkeepsie	Brendli		
District 9 - City of Poughkeepsie	Rieser		
District 10 - City of Poughkeepsie	Jeter-Jackson		
District 11 - Towns of Rhinebeck and Clinton	Tyner		
District 12 - Town of East Fishkill	Metzger		
District 15 - Town of Wappinger	Incoronato		
District 16 - Town of Fishkill and City of Beacon	Forman		
District 18 - City of Beacon and Town of Fishkill	Landisi		
District 19 - Towns of North East, Stanford, Pine Plains, Milan	Pulver		
District 21 - Town of East Fishkill	Horton		
District 22 - Towns of Beekman and Union Vale	Coviello		
District 23 - Towns of Pawling, Beekman and East Fishkill	Thomes		
District 24 - Towns of Dover and Union Vale	Surman		
District 25 - Towns of Amenia, Washington, Pleasant Valley	Washburn		

Present: 25

Absent: 0

Vacant: 0

Resolution: ✓

Motion: —

Total : 25 0

Yes No

Abstentions: 0

**2016032 SETTING A PUBLIC HEARING IN CONNECTION WITH THE ESTABLISHMENT OF A PART COUNTY SEWER DISTRICT #10 LOCATED IN THE TOWNS OF HYDE PARK AND RHINEBECK**

Date: February 8, 2016

RESOLUTION NO. 2016033

RE: APPOINTMENT TO THE DUTCHESS COUNTY JURY BOARD

Legislators MICCIO, BOLNER, NESBITT, and STRAWINSKI offer the following and move its adoption:

RESOLVED, that pursuant to Section 503 of the Judiciary Law, the Dutchess County Legislature does hereby appoint Legislator Don Sagliano as a member of the Dutchess County Jury Board, and, be it further

RESOLVED, that the Clerk of the Dutchess County Legislature be and she is hereby authorized and directed to file a certified copy of this resolution in the Office of the Clerk of the County of Dutchess.

APPROVED

MARCUS J. MOLINARO  
COUNTY EXECUTIVE

Date 2/9/2016

STATE OF NEW YORK

ss:

COUNTY OF DUTCHESS

This is to certify that I, the undersigned Clerk of the Legislature of the County of Dutchess have compared the foregoing resolution with the original resolution now on file in the office of said clerk, and which was adopted by said Legislature on the 8th day of February 2016, and that the same is a true and correct transcript of said original resolution and of the whole thereof.

IN WITNESS WHEREOF, I have hereunto set my hand and seal of said Legislature this 8th day of February 2016.

CAROLYN MORRIS, CLERK OF THE LEGISLATURE

# ***Budget, Finance, and Personnel Committee Roll Call***

<i>District</i>	<i>Name</i>	<i>Yes</i>	<i>No</i>
District 3 - Town of LaGrange	Borchert *		
District 17 - Town and Village of Fishkill	Miccio*		
District 13 - Towns of LaGrange, East Fishkill, and Wappinger	Bolner*		
District 20 - Town of Red Hook	Strawinski*		
District 14 - Town of Wappinger	Amparo*		
District 2 - Towns of Pleasant Valley and Poughkeepsie	Sagliano (VC)		
District 6 - Town of Poughkeepsie	Flesland (C)		
District 10 - City of Poughkeepsie	Jeter-Jackson	<i>absent</i>	
District 11 - Towns of Rhinebeck and Clinton	Tyner		
District 12 - Town of East Fishkill	Metzger		
District 15 - Town of Wappinger	Incoronato		
District 22 - Towns of Beekman and Union Vale	Coviello		

Present: <u>11</u>	Resolution: <u>✓</u>	Total :	<u>11</u>	<u>0</u>
Absent: <u>1</u>	Motion: <u>    </u>		Yes	No
Vacant: <u>0</u>		Abstentions:	<u>0</u>	

**2016033APPOINTMENT TO THE DUTCHESS COUNTY JURY BOARD**

Date: February 4, 2016

# Roll Call Sheets

District	Last Name	Yes	No
District 3 - Town of LaGrange	Borchert		
District 17 - Town and Village of Fishkill	Miccio		
District 13 - Towns of LaGrange, East Fishkill, and Wappinger	Bolner		
District 20 - Town of Red Hook	Strawinski		
District 14 - Town of Wappinger	Amparo		
District 1 - Town of Poughkeepsie	Nesbitt		
District 2 - Towns of Pleasant Valley and Poughkeepsie	Sagliano		
District 4 - Town of Hyde Park	Black		
District 5 - Town of Poughkeepsie	Roman		
District 6 - Town of Poughkeepsie	Flesland		
District 7 - Towns of Hyde Park and Poughkeepsie	Truitt		
District 8 - City and Town of Poughkeepsie	Brendli		
District 9 - City of Poughkeepsie	Rieser		
District 10 - City of Poughkeepsie	Jeter-Jackson		
District 11 - Towns of Rhinebeck and Clinton	Tyner		
District 12 - Town of East Fishkill	Metzger		
District 15 - Town of Wappinger	Incoronato		
District 16 - Town of Fishkill and City of Beacon	Forman		
District 18 - City of Beacon and Town of Fishkill	Landisi		
District 19 - Towns of North East, Stanford, Pine Plains, Milan	Pulver		
District 21 - Town of East Fishkill	Horton		
District 22 - Towns of Beekman and Union Vale	Coviello		
District 23 - Towns of Pawling, Beekman and East Fishkill	Thomes		
District 24 - Towns of Dover and Union Vale	Surman		
District 25 - Towns of Amenia, Washington, Pleasant Valley	Washburn		

Present: 25  
 Absent: 0  
 Vacant: 0

Resolution: ✓  
 Motion:     

Total : 25 0  
           Yes       No  
 Abstentions: 0

2016033 APPOINTMENT TO THE DUTCHESS COUNTY JURY BOARD

Date: February 8, 2016

RESOLUTION NO. 2016034

RE: APPOINTMENT TO AUDIT REVIEW ADVISORY BOARD

Legislators FLESLAND, BORCHERT, MICCIO, BOLNER, NESBITT, and STRAWINSKI offer the following and move its adoption:

WHEREAS, pursuant to Resolution No. 117 of 1997, the Dutchess County Legislature created an Audit Review Advisory Board, and

WHEREAS, pursuant to the authorizing resolution, the Chairman of the Legislature has the power to appoint one member to the board, subject to confirmation by the Legislature, and

WHEREAS, the Chairman hereby appoints Don Sagliano to be a member of the Audit Review Advisory Board, now, therefore, be it

RESOLVED, that the Dutchess County Legislature confirms the appointment of Don Sagliano to the Audit Review Advisory Board for a term to expire on December 31, 2017, and hereby confirms the Chairman's appointment.

APPROVED

MARCUS J. MOLINARO  
COUNTY EXECUTIVE

Date 2/9/2016

STATE OF NEW YORK

ss:

COUNTY OF DUTCHESS

This is to certify that I, the undersigned Clerk of the Legislature of the County of Dutchess have compared the foregoing resolution with the original resolution now on file in the office of said clerk, and which was adopted by said Legislature on the 8th day of February 2016, and that the same is a true and correct transcript of said original resolution and of the whole thereof.

IN WITNESS WHEREOF, I have hereunto set my hand and seal of said Legislature this 8th day of February 2016.

CAROLYN MORRIS, CLERK OF THE LEGISLATURE

# ***Budget, Finance, and Personnel Committee Roll Call***

<i>District</i>	<i>Name</i>	<i>Yes</i>	<i>No</i>
District 3 - Town of LaGrange	Borchert *		
District 17 - Town and Village of Fishkill	Miccio*		
District 13 - Towns of LaGrange, East Fishkill, and Wappinger	Bolner*		
District 20 - Town of Red Hook	Strawinski*		
District 14 - Town of Wappinger	Amparo*		
District 2 - Towns of Pleasant Valley and Poughkeepsie	Sagliano (VC)		
District 6 - Town of Poughkeepsie	Flesland (C)		
District 10 - City of Poughkeepsie	Jeter-Jackson	<i>absent</i>	
District 11 - Towns of Rhinebeck and Clinton	Tyner		
District 12 - Town of East Fishkill	Metzger		
District 15 - Town of Wappinger	Incoronato		
District 22 - Towns of Beekman and Union Vale	Coviello		

Present: <u>11</u>	Resolution: <u>✓</u>	Total :	<u>11</u>	<u>6</u>
Absent: <u>1</u>	Motion: <u>    </u>		Yes	No
Vacant: <u>0</u>		Abstentions:	<u>0</u>	

**2016034 APPOINTMENT TO AUDIT REVIEW ADVISORY BOARD**

Date: February 4, 2016

# Roll Call Sheets

District	Last Name	Yes	No
District 3 - Town of LaGrange	Borchert		
District 17 - Town and Village of Fishkill	Miccio		
District 13 - Towns of LaGrange, East Fishkill, and Wappinger	Bolner		
District 20 - Town of Red Hook	Strawinski		
District 14 - Town of Wappinger	Amparo		
District 1 - Town of Poughkeepsie	Nesbitt		
District 2 - Towns of Pleasant Valley and Poughkeepsie	Sagliano		
District 4 - Town of Hyde Park	Black		
District 5 - Town of Poughkeepsie	Roman		
District 6 - Town of Poughkeepsie	Flesland		
District 7 - Towns of Hyde Park and Poughkeepsie	Truitt		
District 8 - City and Town of Poughkeepsie	Brendli		
District 9 - City of Poughkeepsie	Rieser		
District 10 - City of Poughkeepsie	Jeter-Jackson		
District 11 - Towns of Rhinebeck and Clinton	Tyner		
District 12 - Town of East Fishkill	Metzger		
District 15 - Town of Wappinger	Incoronato		
District 16 - Town of Fishkill and City of Beacon	Forman		
District 18 - City of Beacon and Town of Fishkill	Landisi		
District 19 - Towns of North East, Stanford, Pine Plains, Milan	Pulver		
District 21 - Town of East Fishkill	Horton		
District 22 - Towns of Beekman and Union Vale	Coviello		
District 23 - Towns of Pawling, Beekman and East Fishkill	Thomes		
District 24 - Towns of Dover and Union Vale	Surman		
District 25 - Towns of Amenia, Washington, Pleasant Valley	Washburn		

Present:	<u>25</u>	Resolution:	<u>✓</u>	Total :	<u>25</u>	<u>0</u>
Absent:	<u>0</u>	Motion:	<u>    </u>		Yes	No
Vacant:	<u>0</u>			Abstentions:	<u>0</u>	

2016034 APPOINTMENT TO AUDIT REVIEW ADVISORY BOARD

Date: February 8, 2016



RESOLUTION NO. 2016035

RE: APPOINTMENT TO THE BOARD OF TRUSTEES OF DUTCHESS  
COMMUNITY COLLEGE

Legislators FLESLAND, MICCIO, BOLNER, and STRAWINSKI offer the following and move its adoption:


WHEREAS, a vacancy exists on the Board of Trustees of Dutchess Community College by reason of the resignation of Robert G. Rolison, and be it

RESOLVED, that the Dutchess County Legislature does hereby appoint Dale L. Borchert as a member of the Board of Trustees of Dutchess Community College to fill the unexpired term of Robert G. Rolison to expire on the 30<sup>th</sup> day of June, 2019.

APPOINTMENT

Dale L. Borchert  
141 Simone Drive  
Poughkeepsie NY 12603  
(Filling the unexpired term of  
Robert G. Rolison)

June 30, 2019

APPROVED  
  
MARCUS J. MOLINARO  
COUNTY EXECUTIVE  
Date 2/9/2016

STATE OF NEW YORK

ss:

COUNTY OF DUTCHESS

This is to certify that I, the undersigned Clerk of the Legislature of the County of Dutchess have compared the foregoing resolution with the original resolution now on file in the office of said clerk, and which was adopted by said Legislature on the 8th day of February 2016, and that the same is a true and correct transcript of said original resolution and of the whole thereof.

IN WITNESS WHEREOF, I have hereunto set my hand and seal of said Legislature this 8th day of February 2016.

  
CAROLYN MORRIS, CLERK OF THE LEGISLATURE

# ***Budget, Finance, and Personnel Committee Roll Call***

<i>District</i>	<i>Name</i>	<i>Yes</i>	<i>No</i>
District 3 - Town of LaGrange	Borchert *		
District 17 - Town and Village of Fishkill	Miccio*		
District 13 - Towns of LaGrange, East Fishkill, and Wappinger	Bolner*		
District 20 - Town of Red Hook	Strawinski*		
District 14 - Town of Wappinger	Amparo*		
District 2 - Towns of Pleasant Valley and Poughkeepsie	Sagliano (VC)		
District 6 - Town of Poughkeepsie	Flesland (C)		
District 10 - City of Poughkeepsie	Jeter-Jackson	<i>absent</i>	
District 11 - Towns of Rhinebeck and Clinton	Tyner		
District 12 - Town of East Fishkill	Metzger		
District 15 - Town of Wappinger	Incoronato		
District 22 - Towns of Beekman and Union Vale	Coviello		

Present: <u>11</u>	Resolution: <u>✓</u>	Total :	<u>11</u>	<u>0</u>
Absent: <u>1</u>	Motion: <u>    </u>		Yes	No
Vacant: <u>0</u>		Abstentions:	<u>0</u>	

**2016035 APPOINTMENT TO THE BOARD OF TRUSTEES OF DUTCHESS COMMUNITY COLLEGE**

Date: February 4, 2016

# Roll Call Sheets

District	Last Name	Yes	No
District 3 - Town of LaGrange	Borchert		
District 17 - Town and Village of Fishkill	Miccio		
District 13 - Towns of LaGrange, East Fishkill, and Wappinger	Bolner		
District 20 - Town of Red Hook	Strawinski		
District 14 - Town of Wappinger	Amparo		
District 1 - Town of Poughkeepsie	Nesbitt		
District 2 - Towns of Pleasant Valley and Poughkeepsie	Sagliano		
District 4 - Town of Hyde Park	Black		
District 5 - Town of Poughkeepsie	Roman		
District 6 - Town of Poughkeepsie	Flesland		
District 7 - Towns of Hyde Park and Poughkeepsie	Truitt		
District 8 - City and Town of Poughkeepsie	Brendli		
District 9 - City of Poughkeepsie	Rieser		
District 10 - City of Poughkeepsie	Jeter-Jackson		
District 11 - Towns of Rhinebeck and Clinton	Tyner		
District 12 - Town of East Fishkill	Metzger		
District 15 - Town of Wappinger	Incoronato		
District 16 - Town of Fishkill and City of Beacon	Forman		
District 18 - City of Beacon and Town of Fishkill	Landisi		
District 19 - Towns of North East, Stanford, Pine Plains, Milan	Pulver		
District 21 - Town of East Fishkill	Horton		
District 22 - Towns of Beekman and Union Vale	Coviello		
District 23 - Towns of Pawling, Beekman and East Fishkill	Thomes		
District 24 - Towns of Dover and Union Vale	Surman		
District 25 - Towns of Amenia, Washington, Pleasant Valley	Washburn		

Present:	<u>25</u>	Resolution:	<u>✓</u>	Total :	<u>25</u>	<u>0</u>
Absent:	<u>0</u>	Motion:	<u>    </u>		Yes	No
Vacant:	<u>0</u>			Abstentions:	<u>0</u>	

2016035 APPOINTMENT TO THE BOARD OF TRUSTEES OF DUTCHESS  
COMMUNITY COLLEGE

Date: February 8, 2016

## RESOLUTION NO. 2016036

## RE: APPOINTMENT AND REAPPOINTMENT TO THE VETERANS AFFAIRS COMMITTEE

Legislators THOMES, BORCHERT, MICCIO, BOLNER, BLACK, and STRAWINSKI offer the following and move its adoption:

WHEREAS, by Resolutions No. 314 of 1995, the Dutchess County Legislature did create a Veterans Affairs Committee to advise the County Legislature with respect to those matters relating to veteran affairs to consist of eight member veterans from the private sector and four County Legislators to be appointed by and serve at the pleasure of the Chairman of the County Legislature subject to confirmation by the County Legislature, and

WHEREAS, by Resolutions No. 376 of 2007 the Dutchess County Legislature did reactivate the Veterans Affairs Committee, and amend Resolution No. 314 of 1995 to assign staggered terms of two years to appointments with expiration dates of November 30<sup>th</sup>, and

WHEREAS, a vacancy exists on the Veterans Affairs Committee, and

WHEREAS, Marc Coviello has expressed an interest in being appointed to said Committee, and

WHEREAS, Francena Amparo has expressed an interest in being reappointed to said Committee, and

WHEREAS, the Chairman has appointed Marc Coviello and reappointed Francena Amparo to the Veterans Affairs Committee subject to confirmation by the Dutchess County Legislature, now, therefore, be it

RESOLVED, that the appointment and reappointment of the following individuals to the Veterans Affairs Committee is hereby confirmed:

APPOINTMENT

Marc Coviello  
263 Hynes Road  
Poughquag, NY 12570  
(Filling the Vacancy of Alison MacAvery)

TERM EXPIRATION

November 30, 2017

REAPPOINTMENT

Francena Amparo  
32 Scarborough Lane, Suite C  
Wappingers Falls, NY 12590

TERM EXPIRATION

November 30, 2017  
MARCUS J. MOLINARO  
COUNTY EXECUTIVE

Date 2/9/2016

STATE OF NEW YORK

ss:

COUNTY OF DUTCHESS

This is to certify that I, the undersigned Clerk of the Legislature of the County of Dutchess have compared the foregoing resolution with the original resolution now on file in the office of said clerk, and which was adopted by said Legislature on the 8th day of February 2016, and that the same is a true and correct transcript of said original resolution and of the whole thereof.

IN WITNESS WHEREOF, I have hereunto set my hand and seal of said Legislature this 8th day of February 2016.

*Carolyn Morris*  
CAROLYN MORRIS, CLERK OF THE LEGISLATURE

## ***Family and Human Services Committee Roll Call***

<i><b>District</b></i>	<i><b>Name</b></i>	<i><b>Yes</b></i>	<i><b>No</b></i>
District 3 - Town of LaGrange	Borchert *		
District 17 - Town and Village of Fishkill	Miccio*		
District 13 - Towns of LaGrange, East Fishkill, and Wappinger	Bolner *		
District 20 - Town of Red Hook	Strawinski*	<i>absent</i>	
District 14 - Town of Wappinger	Amparo*		
District 9 - City of Poughkeepsie	Rieser		
District 10 - City of Poughkeepsie	Jeter-Jackson (VC)		
District 16 - Town of Fishkill and City of Beacon	Forman		
District 18 - City of Beacon and Town of Fishkill	Landisi		
District 21 - Town of East Fishkill	Horton		
District 23 - Towns of Pawling, Beekman and East Fishkill	Thomes (C)		
District 25 - Towns of Amenia, Washington, Pleasant Valley	Washburn	<i>absent</i>	

Present: 10  
 Absent: 2  
 Vacant: 0

Resolution: ✓  
 Motion:     

Total : 10 0  
           Yes      No  
 Abstentions:     

**2016036 APPOINTMENT AND REAPPOINTMENT TO THE VETERANS AFFAIRS COMMITTEE**

Date: February 4, 2016

# Roll Call Sheets

District	Last Name	Yes	No
District 3 - Town of LaGrange	Borchert		
District 17 - Town and Village of Fishkill	Miccio		
District 13 - Towns of LaGrange, East Fishkill, and Wappinger	Bolner		
District 20 - Town of Red Hook	Strawinski		
District 14 - Town of Wappinger	Amparo		
District 1 - Town of Poughkeepsie	Nesbitt		
District 2 - Towns of Pleasant Valley and Poughkeepsie	Sagliano		
District 4 - Town of Hyde Park	Black		
District 5 - Town of Poughkeepsie	Roman		
District 6 - Town of Poughkeepsie	Flesland		
District 7 - Towns of Hyde Park and Poughkeepsie	Truitt		
District 8 - City and Town of Poughkeepsie	Brendli		
District 9 - City of Poughkeepsie	Rieser		
District 10 - City of Poughkeepsie	Jeter-Jackson		
District 11 - Towns of Rhinebeck and Clinton	Tyner		
District 12 - Town of East Fishkill	Metzger		
District 15 - Town of Wappinger	Incoronato		
District 16 - Town of Fishkill and City of Beacon	Forman		
District 18 - City of Beacon and Town of Fishkill	Landisi		
District 19 - Towns of North East, Stanford, Pine Plains, Milan	Pulver		
District 21 - Town of East Fishkill	Horton		
District 22 - Towns of Beekman and Union Vale	Coviello		
District 23 - Towns of Pawling, Beekman and East Fishkill	Thomes		
District 24 - Towns of Dover and Union Vale	Surman		
District 25 - Towns of Amenia, Washington, Pleasant Valley	Washburn		

Present: 25

Absent: 0

Vacant: 0

Resolution: ✓

Motion:     

Total : 25 0

Yes No

Abstentions: 0

**2016036 APPOINTMENT AND REAPPOINTMENT TO THE VETERANS AFFAIRS COMMITTEE**

Date: February 8, 2016

RESOLUTION NO. 2016037

RE: APPOINTMENTS TO THE DISTRICT 3 FISH AND WILDLIFE  
MANAGEMENT BOARD

Legislators FORMAN, BORCHERT, MICCIO, BOLNER, NESBITT, and  
STRAWINSKI offer the following and move its adoption:

WHEREAS, pursuant to Article 11, Section 11-0501 of the Environmental  
Conservation Law of the State of New York, the Chairman of the Legislature shall  
appoint members to the District 3 Fish and Wildlife Management Board, subject to  
confirmation by the County Legislature, and

WHEREAS, vacancies exists on such board, now, therefore, be it

RESOLVED, that the following appointments to the District 3 Fish and Wildlife  
Management Board is hereby confirmed by this Legislature for the terms indicated:

APPOINTMENTS

TERM ENDING

John Metzger  
64 Marges Way  
Hopewell Junction, NY 12533 (County Legislative Representative)

12/31/17

Sandy Washburn  
7A Clinton Hollow Road  
Salt Point, NY 12578 (County Legislative Representative - Alternate)

12/31/17

APPROVED

MARCUS J. MOLINARO  
COUNTY EXECUTIVE

Date

2/9/2016

STATE OF NEW YORK

ss:

COUNTY OF DUTCHESS

This is to certify that I, the undersigned Clerk of the Legislature of the County of Dutchess have compared the foregoing  
resolution with the original resolution now on file in the office of said clerk, and which was adopted by said Legislature on the 8th day of  
February 2016, and that the same is a true and correct transcript of said original resolution and of the whole thereof.

IN WITNESS WHEREOF, I have hereunto set my hand and seal of said Legislature this 8th day of February 2016.

CAROLYN MORRIS, CLERK OF THE LEGISLATURE

## *Environment Committee Roll Call*

<i>District</i>	<i>Name</i>	<i>Yes</i>	<i>No</i>
District 3 - Town of LaGrange	Borchert *	✓	
District 17 - Town and Village of Fishkill	Miccio*		
District 13 - Towns of LaGrange, East Fishkill, and Wappinger	Bolner*		
District 20 - Town of Red Hook	Strawinski*		
District 14 - Town of Wappinger	Amparo*		
District 9 - City of Poughkeepsie	Rieser		
District 11 - Towns of Rhinebeck and Clinton	Tyner		
District 12 - Town of East Fishkill	Metzger		
District 16 - Town of Fishkill and City of Beacon	Forman (C)		
District 22 - Towns of Beekman and Union Vale	Coviello		
District 24 - Towns of Dover and Union Vale	Surman		
District 25 - Towns of Amenia, Washington, Pleasant Valley	Washburn (VC)	<i>absent</i>	

Present: <u>11</u>	Resolution: <u>✓</u>	Total : <u>11</u> <u>0</u>
Absent: <u>1</u>	Motion: <u>    </u>	Yes      No
Vacant: <u>0</u>		Abstentions: <u>0</u>

**2016037 APPOINTMENTS TO THE DISTRICT 3 FISH AND WILDLIFE MANAGEMENT BOARD**

Date: February 4, 2016



# Roll Call Sheets

District	Last Name	Yes	No
District 3 - Town of LaGrange	Borchert		
District 17 - Town and Village of Fishkill	Miccio		
District 13 - Towns of LaGrange, East Fishkill, and Wappinger	Bolner		
District 20 - Town of Red Hook	Strawinski		
District 14 - Town of Wappinger	Amparo		
District 1 - Town of Poughkeepsie	Nesbitt		
District 2 - Towns of Pleasant Valley and Poughkeepsie	Sagliano		
District 4 - Town of Hyde Park	Black		
District 5 - Town of Poughkeepsie	Roman		
District 6 - Town of Poughkeepsie	Flesland		
District 7 - Towns of Hyde Park and Poughkeepsie	Truitt		
District 8 - City and Town of Poughkeepsie	Brendli		
District 9 - City of Poughkeepsie	Rieser		
District 10 - City of Poughkeepsie	Jeter-Jackson		
District 11 - Towns of Rhinebeck and Clinton	Tyner		
District 12 - Town of East Fishkill	Metzger		
District 15 - Town of Wappinger	Incoronato		
District 16 - Town of Fishkill and City of Beacon	Forman		
District 18 - City of Beacon and Town of Fishkill	Landisi		
District 19 - Towns of North East, Stanford, Pine Plains, Milan	Pulver		
District 21 - Town of East Fishkill	Horton		
District 22 - Towns of Beekman and Union Vale	Coviello		
District 23 - Towns of Pawling, Beekman and East Fishkill	Thomes		
District 24 - Towns of Dover and Union Vale	Surman		
District 25 - Towns of Amenia, Washington, Pleasant Valley	Washburn		

Present:	<u>25</u>	Resolution:	<u>✓</u>	Total :	<u>25</u>	<u>0</u>
Absent:	<u>0</u>	Motion:	<u>—</u>		Yes	No
Vacant:	<u>0</u>			Abstentions:	<u>0</u>	

**2016037 APPOINTMENTS TO THE DISTRICT 3 FISH AND WILDLIFE MANAGEMENT BOARD**

Date: February 8, 2016

RESOLUTION NO. 2016038

RE: APPOINTMENT TO CORNELL COOPERATIVE EXTENSION ASSOCIATION  
BOARD OF DIRECTORS

Legislators FORMAN, MICCIO, BOLNER, STRAWINSKI, FLESLAND, NESBITT,  
JETER-JACKSON, and SAGLIANO offer the following and move its adoption,

WHEREAS, the Cornell Cooperative Extension Association Dutchess County  
("Association") was created pursuant to the provisions of New York State County Law § 224  
(8)(b), as amended; and

WHEREAS, the Association is governed by a Constitution last dated effective on January  
1, 2013; and

WHEREAS, the Association is governed by a Board of Directors; and

WHEREAS, in accordance with the Constitution the Dutchess County Legislature is  
requested annually to appoint one legislator to serve as an ex-officio Director on the  
Association's Board of Directors; now, therefore, be it

RESOLVED, that the following person be appointed to the Cornell Cooperative  
Extension Association Board of Directors effective immediately:

APPOINTMENT

Sandra Washburn, Legislator  
7A Clinton Hollow Road  
Salt Point, NY 12578

TERM EXPIRING

December 31, 2016

APPROVED

MARCUS J. MOLINARO  
COUNTY EXECUTIVE

Date 2/9/2016

STATE OF NEW YORK

ss:

COUNTY OF DUTCHESS

This is to certify that I, the undersigned Clerk of the Legislature of the County of Dutchess have compared the foregoing resolution with  
the original resolution now on file in the office of said clerk, and which was adopted by said Legislature on the 8th day of February 2016, and that the  
same is a true and correct transcript of said original resolution and of the whole thereof.

IN WITNESS WHEREOF, I have hereunto set my hand and seal of said Legislature this 8th day of February 2016.

*Carolyn Morris*  
CAROLYN MORRIS, CLERK OF THE LEGISLATURE

# Environment Committee Roll Call

District	Name	Yes	No
District 3 - Town of LaGrange	Borchert *	✓	
District 17 - Town and Village of Fishkill	Miccio*		
District 13 - Towns of LaGrange, East Fishkill, and Wappinger	Bolner*		
District 20 - Town of Red Hook	Strawinski*		
District 14 - Town of Wappinger	Amparo*		
District 9 - City of Poughkeepsie	Rieser		
District 11 - Towns of Rhinebeck and Clinton	Tyner		
District 12 - Town of East Fishkill	Metzger		
District 16 - Town of Fishkill and City of Beacon	Forman (C)		
District 22 - Towns of Beekman and Union Vale	Coviello		
District 24 - Towns of Dover and Union Vale	Surman		
District 25 - Towns of Amenia, Washington, Pleasant Valley	Washburn (VC)	absent	

Present:	<u>11</u>	Resolution:	<u>✓</u>	Total :	<u>11</u>	<u>0</u>
Absent:	<u>1</u>	Motion:	<u>    </u>		Yes	No
Vacant:	<u>0</u>			Abstentions:	<u>0</u>	

2016038 APPOINTMENT TO CORNELL COOPERATIVE EXTENSION ASSOCIATION BOARD OF DIRECTORS

Date: February 4, 2016

# Roll Call Sheets

District	Last Name	Yes	No
District 3 - Town of LaGrange	Borchert		
District 17 - Town and Village of Fishkill	Miccio		
District 13 - Towns of LaGrange, East Fishkill, and Wappinger	Bolner		
District 20 - Town of Red Hook	Strawinski		
District 14 - Town of Wappinger	Amparo		
District 1 - Town of Poughkeepsie	Nesbitt		
District 2 - Towns of Pleasant Valley and Poughkeepsie	Sagliano		
District 4 - Town of Hyde Park	Black		
District 5 - Town of Poughkeepsie	Roman		
District 6 - Town of Poughkeepsie	Flesland		
District 7 - Towns of Hyde Park and Poughkeepsie	Truitt		
District 8 - City and Town of Poughkeepsie	Brendli		
District 9 - City of Poughkeepsie	Rieser		
District 10 - City of Poughkeepsie	Jeter-Jackson		
District 11 - Towns of Rhinebeck and Clinton	Tyner		
District 12 - Town of East Fishkill	Metzger		
District 15 - Town of Wappinger	Incoronato		
District 16 - Town of Fishkill and City of Beacon	Forman		
District 18 - City of Beacon and Town of Fishkill	Landisi		
District 19 - Towns of North East, Stanford, Pine Plains, Milan	Pulver		
District 21 - Town of East Fishkill	Horton		
District 22 - Towns of Beekman and Union Vale	Coviello		
District 23 - Towns of Pawling, Beekman and East Fishkill	Thomes		
District 24 - Towns of Dover and Union Vale	Surman		
District 25 - Towns of Amenia, Washington, Pleasant Valley	Washburn		

Present: 25

Resolution: ✓

Total : 25 0

Absent: 0

Motion:     

Yes No

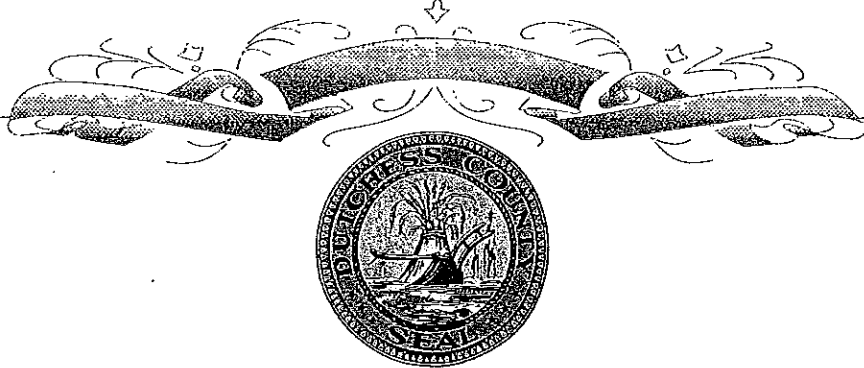
Vacant: 0

Abstentions: 0

**2016038 APPOINTMENT TO CORNELL COOPERATIVE EXTENSION ASSOCIATION BOARD OF DIRECTORS**

Date: February 8, 2016

# Dutchess County Legislature



Commendation: Eagle Scout Nicholas Goebelbecker

Legislator COVIELLO offers the following and moves its adoption:

WHEREAS, Nicholas Goebelbecker is a member of Boy Scout Troop 40 and has obtained the rank of Eagle Scout, which he received at a Court of Honor on January 27, 2016, and

WHEREAS, Nicholas started his scouting career with Cub Scout Pack 227, and then he joined Boy Scout Troop 40, and

WHEREAS, Nicholas Goebelbecker has demonstrated a commitment to the highest ideals of Scouting and to his community earning 25 Merit Badges while obtaining the rank of Eagle Scout, and

WHEREAS, Eagle Scout Nicholas Goebelbecker has held the positions of Chaplain's Aid, Assistant Patrol Leader, and Senior Patrol Leader, and

WHEREAS, Nicholas's Eagle Scout Project was performed at the Dutchess County Rail Trail in Dutchess County, New York, where he built and installed bird houses along the trail, and

WHEREAS, Nicholas is a junior at Kennedy Catholic High School where he is a three season varsity athlete running cross country, and winter and spring track, and he is a member of the Engineering Club, Stage Crew as the Assistant Lighting Director, the National Honor Society, and the Young Republicans Club, and he is also a member of the Beekman Revolution Travel Soccer Team, and is an active parishioner at St. Denis Church where he served for many years as an Alter Server, and a Youth Helper at their summer Vacation Bible School, and he is a certified grade 8 soccer referee, and plans on entering either the U.S. Air Force or U.S. Naval Academy where he plans to study biomedical engineering, now, therefore, be it

RESOLVED, that the Dutchess County Legislature, on behalf of all the people of Dutchess County, does hereby commend and congratulate, Eagle Scout Nicholas Goebelbecker, and, be it further

RESOLVED, that the Dutchess County Legislature, does hereby extend to Eagle Scout Nicholas Goebelbecker, its best wishes in all of his future endeavors.

Resolution No. 2016039


STATE OF NEW YORK

ss:

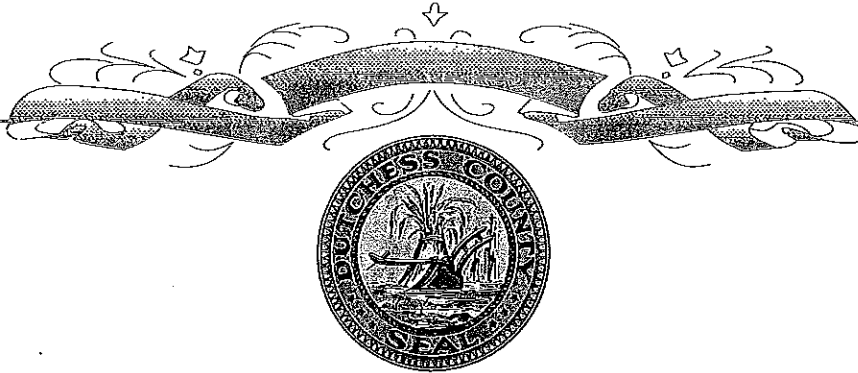
COUNTY OF DUTCHESS

This is to certify that I, the undersigned Clerk of the Legislature of the County of Dutchess have compared the foregoing resolution with the original resolution now on file in the office of said clerk, and which was adopted by said Legislature on the 8th day of February 2016, and that the same is a true and correct transcript of said original resolution and of the whole thereof.

IN WITNESS WHEREOF, I have hereunto set my hand and seal of said Legislature this 8th day of February 2016.

  
CAROLYN MORRIS, CLERK OF THE LEGISLATURE

# Dutchess County Legislature



## Commendation: The EndoCrime Fighters

Legislator BORCHERT offers the following and moves its adoption:

WHEREAS, the Dutchess County Legislature seeks to acknowledge the contributions of individuals and groups that enhance the quality of life in Dutchess County, and

WHEREAS, the EndoCrime Fighters is a team of Arlington High School students who are researching the impact of endocrine disruptors, which are chemicals that hinder the normal functioning of the endocrine system and may cause negative effects in various organisms, and are found in many personal care products, and

WHEREAS, one such example is Triclosan which is found in some toothpastes and other personal care products, they researched the ecological impacts of Triclosan, how it is an androgenic endocrine disruptor, and how it is not necessary to the proper functioning of the product that it is in, and as they advanced in their project they expanded their focus to other endocrine disruptors including, phthalates, parabens, BPA, and the hundreds of chemicals under the ambiguous label of "fragrance" and the adverse effects of these endocrine disruptors, and

WHEREAS, the EndoCrime Fighters believe the next step would be to ban these chemicals, starting with Triclosan, in order to protect its people and environment, and Senators Dianne Feinstein of California and Susan Collins of Maine have introduced the Personal Care Products Safety Act of 2015, and Senator Tim Kennedy of New York is calling for a state ban on Triclosan in Senate Bill S6070, and

WHEREAS, the EndoCrime Fighters project is multifaceted, and they have done extensive scientific literature searches, conducted experiments, educated students and parents, and met with multiple scientists in our local area, and

WHEREAS, the EndoCrime Fighters entered the Lexus Eco Challenge under the Land and Water category where each team chose an environmental issue to research and ultimately submit a PowerPoint illustrating their research and implementation, and were one of eight high school research teams to win this round of the competition winning \$10,000, with Arlington High School receiving \$2,000 of this prize money, and they currently have a petition on [change.org](http://change.org) requesting a ban on Triclosan in Dutchess County, and further efforts to spread awareness of endocrine disrupting chemicals (EDCs) in personal care products, now, therefore, be it

RESOLVED, that the Dutchess County Legislature on behalf of all the people of Dutchess County does hereby commend, congratulate, and thank the EndoCrime Fighters team of Arlington High School students that consists of Kira Murphy, John Furcick, Hali Pregnall, Luke Hagin, Jamie Constantino, and their Advisor Maribel Pregnall for their efforts in this very important topic and sharing their research with others, and be it further

RESOLVED, that the Dutchess County Legislature hereby extends its best wishes and continued success to the EndoCrime Fighters team of Arlington High School students Kira Murphy, John Furcick, Hali Pregnall, Luke Hagin, Jamie Constantino, and their Advisor Maribel Pregnall.

Resolution No. 2016040  
STATE OF NEW YORK

ss:

COUNTY OF DUTCHESS

This is to certify that I, the undersigned Clerk of the Legislature of the County of Dutchess have compared the foregoing resolution with the original resolution now on file in the office of said clerk, and which was adopted by said Legislature on the 8th day of February 2016, and that the same is a true and correct transcript of said original resolution and of the whole thereof.

IN WITNESS WHEREOF, I have hereunto set my hand and seal of said Legislature this 8th day of February 2016.

  
CAROLYN MORRIS, CLERK OF THE LEGISLATURE

On motion by Legislator Bolner, duly seconded by Legislator Miccio and carried, the Rules were suspended to allow the public to address the Legislature on agenda and non-agenda items.

Tonya Pineda, Davies Place, Poughkeepsie, questioned when the Common Council would be given a presentation. She urged the

Constantine Kazolias, 47 Noxon Street, Poughkeepsie, stated spoke in favor of countywide police department. He also spoke regarding people in the City of Poughkeepsie that rent out rooms in their homes and don't pay sales tax. He stated there were 16 homes in the City of Poughkeepsie that were in a zone for single families. Comments attached.

No one else wishing to speak, on motion by Legislator Landisi, duly seconded by Legislator Bolner and carried, the Regular Order of Business was resumed.

There being no further business, the Chairman adjourned the meeting at 8:04 p.m.

I am writing to you today to voice my concerns about possible zoning violations in the City of Poughkeepsie. My daughter owns a home in Poughkeepsie's eighth ward; her neighborhood is designated as an R-2 zone. One of the homes in her neighborhood is advertising a room for rent on the website [www.airbnb.com](http://www.airbnb.com). This would ordinarily be of no concern to me or my daughter, but the room is advertised as a short term rental with a minimum one night stay, similar to a hotel.

According to the zoning regulations for an R-2 zone in the City of Poughkeepsie (Section 19-3.13), a special is required for "Renting of not more than two rooms by the resident family, provided that no sign advertising the availability of such rooms shall be displayed." Even if the property in question has the permits necessary to rent rooms in a similar fashion to a hotel, I believe this type of activity is not in the best interests of the City. My daughter's property values have been going down with every passing year. Having a short term rooming house in her neighborhood will certainly drive property values down even further. This type of transient tenancy, if left unchecked, will certainly lead to the destabilization of Poughkeepsie's neighborhoods. Who would want to buy a house next to an unregulated hotel?

My other concern is for the safety and security of my daughter and her family. Unlike a long term rental, these short term tenants are only screened as much as a hotel patron might be. Long term renters normally go through a background check before renting, but anyone with a credit card can book these rentals. Do these rentals have fire extinguishers/sprinklers/exits like hotels are required to have? Do they have the proper insurance required for rentals?

I would also encourage you to look into other short term rentals in the City of Poughkeepsie. Currently there are sixteen rentals in the City listed on the [airbnb](http://airbnb.com) website. Besides the issue I presented above, the City should also be concerned with lost tax revenue due to these rentals. Tourists can rent a room in a private home instead of renting a room at the Grand Hotel and paying tax on the room. Also, are the homeowners who rent rooms required to pay tax on their rental income?

In closing, I hope you will determine the legality of the rental property in my daughter's neighborhood. I also hope that you look into the impact that short term rentals will have on the City of Poughkeepsie.







dutchess county NY

Become a Host

Help

Sign Up

Log In

Dates

Room Type

Price Range

More Filters

Dutchess County NY, United States

1 Guest

Dutchess County Fairgrounds Spring Brook Avenue, Rhine...

Dutchess County Motor Vehicle Mart Avenue Millbrook...

Dutchess County Public Works County Road 83, Pine Plat...

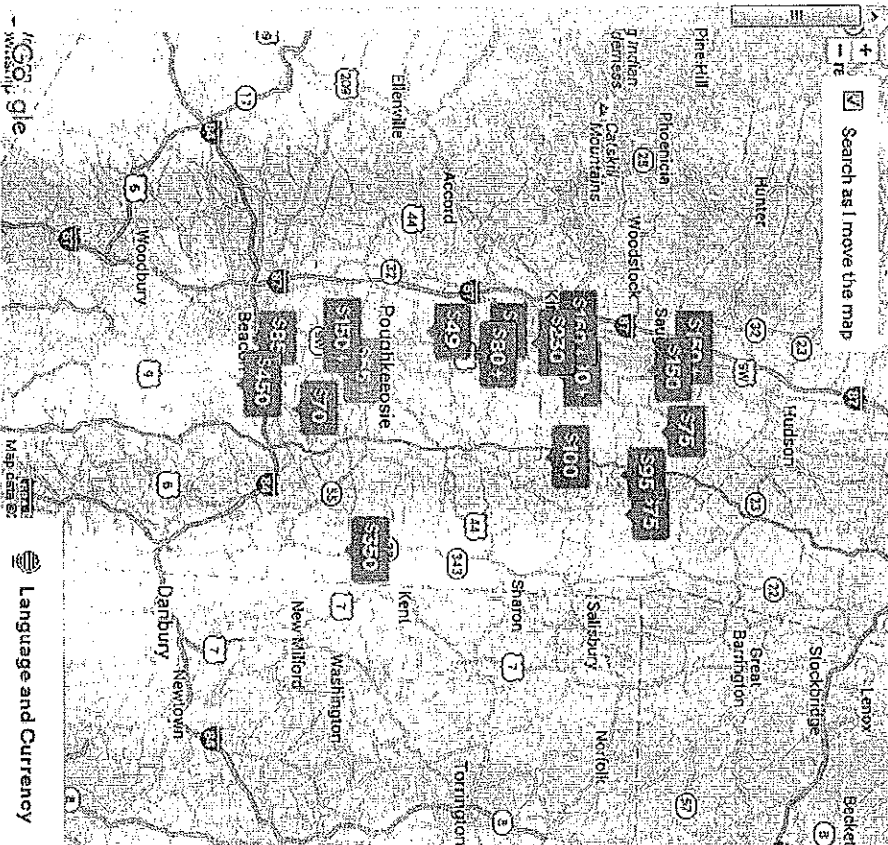
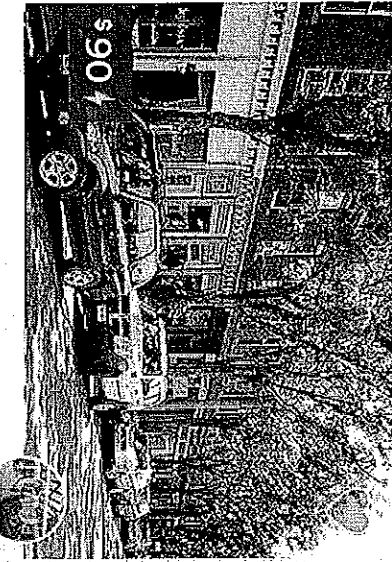
Dutchess County Public Works Beekmantown Poughkeepsie...

powered by Google

\$1000+

Enter dates to see full pricing. Additional fees apply. Taxes may be added.

300+ Rentals · Dutchess County



Language and Currency



Poughkeepsie, NY, United States

Dates

Room Type ☒ Entire home/apt ☐ Private room ☐ Shared room

Price Range  \$10  \$135 Average  \$1000+

More Filters

Enter dates to see full pricing. Additional fees apply. Taxes may be added.

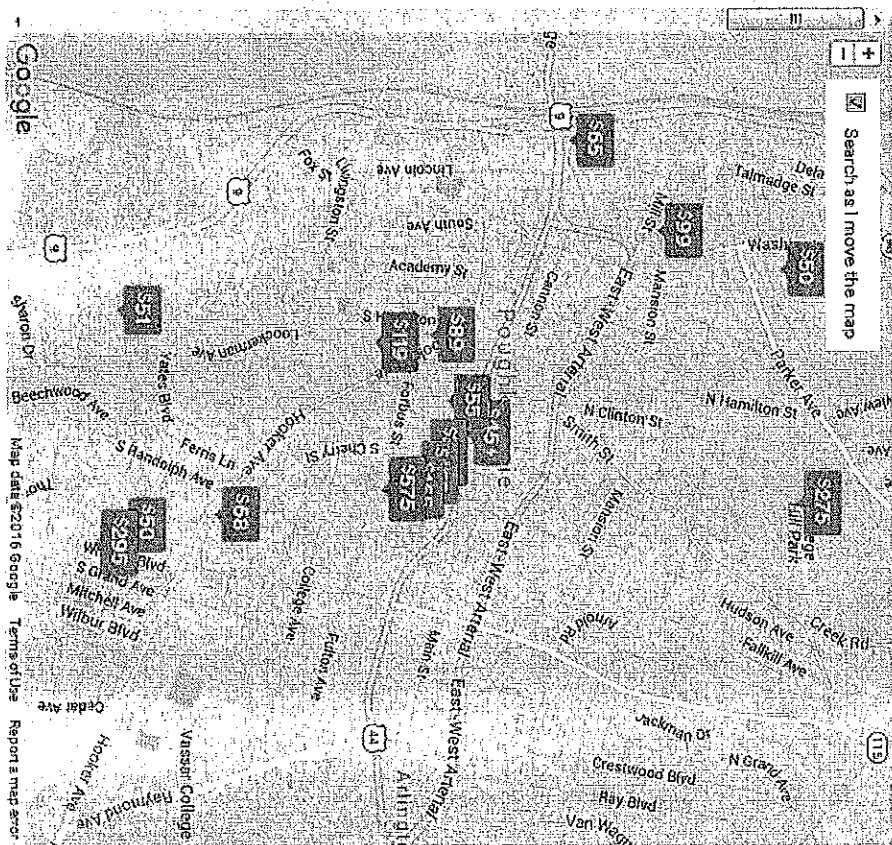
16 Rentals · Poughkeepsie

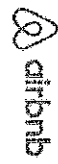


\$68



\$45





Poughkeepsie, NY

Room Type

☒ Entire home/apt

☐ Private room

☐ Shared room

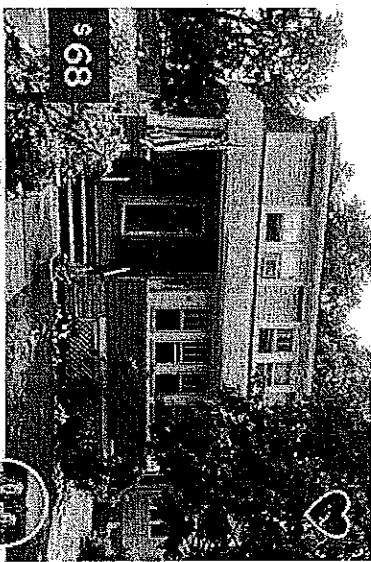
Price Range



More Filters

Enter dates to see full pricing. Additional fees apply. Taxes may be added.

3 Rentals · Poughkeepsie



**Southside Guest Room Getaway**  
Private room · 22 reviews



**The Elephant Room**  
Private room · 13 reviews

